SERVICE MANUAL

BE-5 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-21X1A	RM-836	Italian	SCC-K31B-A	KV-21X1K	RM-836	OIRT	SCC-K35A-A
KV-21X1B	RM-836	French	SCC-K36A-A	KV-21X1L	RM-836	Irish	SCC-K34A-A
KV-21X1D	RM-836	AEP	SCC-K32D-A	KV-21X1R	RM-836	OIRT	SCC-K35B-A
KV-21X1E	RM-836	Spanish	SCC-K30B-A	KV-21X1U	RM-836	UK	SCC-K33A-A

MICROFILM

TRINITRON® COLOR TV

SONY®

ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12 UHF: E21-E69 Hyper: S1-S41	PAL NTSC3.58/4.43 (Only Video in)
AEP	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 Hyper: S1-S41 D/K VHF: R1-R12 UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (Only Video in)
Spanish	B/G/H, D/K	B/G/H VHF: E2-E12 UHF: E21-E69 Hyper : S1-S41 D/K VHF: R1-R20 UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (Only Video in)
OIRT	B/G, D/K	B/G VHF: E2-E12 UHF: E21-E69 Hyper: S1-S41 D/K R1-R12, R21-R69	PAL, SECAM NTSC3.58/4.43 (Only Video in)
Irish UK	I	Irish (KV-21X1L) VHF: A-C, D-J UHF: B21-B69 Cable Cannels : S21-S41 Hyper: S1-S41 UK (KV-21X1U) UHF: B21-B69	PAL NTSC3.58/4.43 (Only Video in)

MODEL	21X1A	21X1B	21X1D	21X1E	21X1K	21X1R	21X1L 21X1U
Power Consumption			75W		75W	75W	100W

SPECIFICATIONS

Picture Tube	Hi-Black Trinitron Approx. 55 cm (21 inches) (Approx. 51 cm picture measured diagonally) 100˚ deflection

Rear/Front Terminals

[REAR]

21-pin Euro connector (CENELEC standard)
- Including audio/video input, RGB input

[FRONT]

→◯ 2 Video input - phono jack
→◯ Audio inputs - phono jacks
→Ⓢ S Video input - 4 pin DIN
🎧 Headphone jack - stereo minijack

Sound output	14Wx2 (music power) 7Wx2 (RMS)
Dimensions	517x444x485 mm approx.
Weight	Approx. 26.5 kg
Supplied accessories	RM-836 Remote Commander (1) IEC designated batteries (2)
Other features	TELETEXT , Fasttext TOP text (KV-21X1D/21X1K/) NICAM (KV-21X1L/21X1U/)

[RM-836]

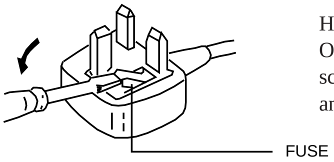
Remote control system	Infrared control
Power requirements	3V dc (2 batteries) R6 (size AA)
Dimensions	Approx. 210x45x24 mm (w/h/d)
Weight	Approx. 90g (Not including battery)

Design and specifications are subject to change without notice.

Item \ Model name	KV-21X1A	KV-21X1B	KV-21X1D	KV-21X1E	KV-21X1K	KV-21X1R	KV-21X1L KV-21X1U
PIP	OFF	OFF	OFF	OFF	OFF	OFF	OFF
MPIP	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Rotation Coil	OFF	OFF	OFF	OFF	OFF	OFF	OFF
VM Set (Velocity Modulation)	ON	ON	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON	ON	ON
Scart 2	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Front in (3)	ON	ON	ON	ON	ON	ON	ON
AKB in 16:9 mode	ON	ON	ON	ON	ON	ON	ON
TXT	ON	ON	ON	ON	ON	ON	ON
FLOF	ON	ON	ON	ON	ON	ON	ON
TOP	ON	ON	ON	ON	ON	ON	ON
Norm B/G/H	ON	ON	ON	ON	ON	ON	OFF
Norm I	OFF	ON	OFF	OFF	OFF	OFF	ON
Norm D/K	OFF	OFF	ON	ON	ON	ON	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF	OFF
Language Preset	Italian	French	German	Spanish	OIRT	OIRT	English

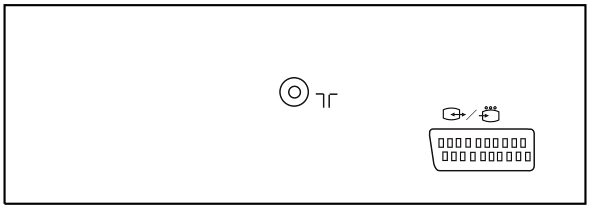
WARNING (KV-21X1L and 21X1U only)

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the ◇ mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME. IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



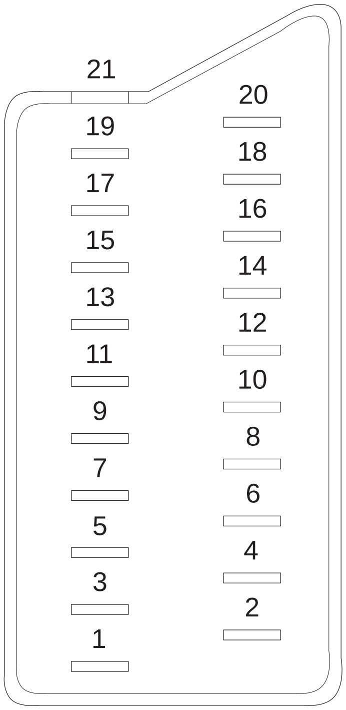
How to replace the fuse.
Open the fuse compartment with the screwdriver blade
and replace the fuse.

21 pin connector (1)

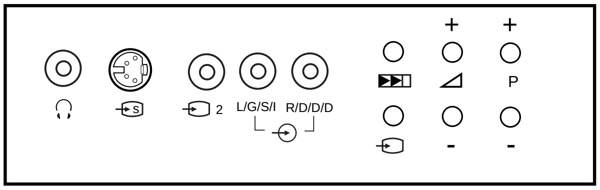


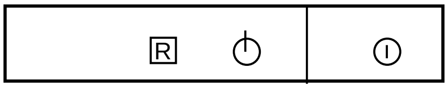
Pin No.	1	2	4	Signal	Signal Level
1	○	○	○	Audio output B (Right)	Standard level : 0.5V rms Output impedance : Less than 1k ohms*
2	○	○	○	Audio input B (Right)	Standard level : 0.5V rms Output impedance : More than 10k ohms*
3	○	○	○	Audio output A (Left)	Standard level : 0.5V rms Output impedance : Less than 1k ohm*
4	○	○	○	Ground (Audio)	
5	○	○	○	Ground (Blue)	
6	○	○	○	Audio input A (Left)	Standard level : 0.5V rms Output impedance : Less than 10k ohm*
7	○	●	●	Blue input	0.7 ± 3dB, 75 ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5 - 12V) : Part mode Low state (0 - 2V) : TV mode Input impedance : More10k ohms Input capacitance : Less than 2nF
9	○	○	○	Ground (Green)	
10	○	○	○	Open	
11	○	●	●	Green	
12	○	○	○	Open	
13	○	○	○	Ground (Red)	
14	○	○	○	Ground (Blanking)	
15	○	—	—	Red input	0.7 ± 3dB, 75 ohms, positive
	—	○	○	(S signal) croma input	0.7 ± 3dB, 75 ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1 - 3V) Low state (0 - 0.4V) Input impedance : 75 ohms
17	○	○	○	Ground (Video output)	
18	○	○	○	Ground (Video input)	
19	○	○	○	Video output	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
20	○	—	—	Video input	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
	—	○	○	Video input Y (S signal)	1V ± 3dB, 75ohms, positive sync : 0.3V (-3 + 10dB)
21	○	○	○	Common ground (plug, sheild)	

○ Connected ● Not Connected (Open) * at 20Hz - 20kHz



Pin No.	Signal	Signal Level
1	Ground	
2	Ground	
3	Y (S signal) input	1V ± 3dB 75 ohm, positive Sync. 0.3V -3 + 10dB
4	C (S signal) input	0.3V ± 3dB 75ohm, positive Sync.





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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE.
LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

SAFETY-RELATED COMPONENT WARNING!!

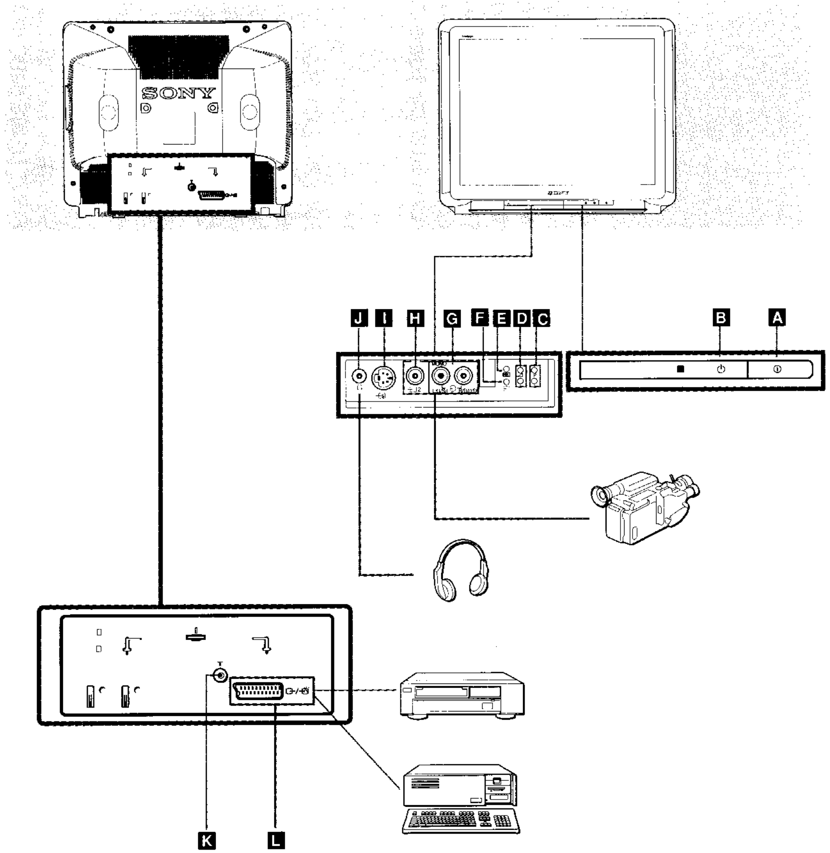
COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instructions Manual. The page numbers of the Operating Instruction Manual remain as in the manual.


J
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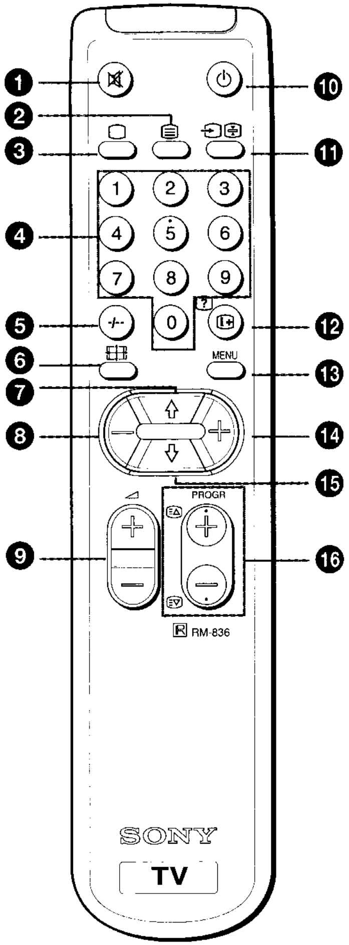
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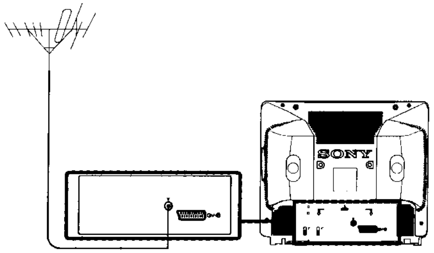
15
16
MENU
PROGR
RM-836
SONY
TV

Please open the flaps at the front and at the back of the Instruction Manual for illustrations of the TV set and the Remote Commander. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander.

Step 1

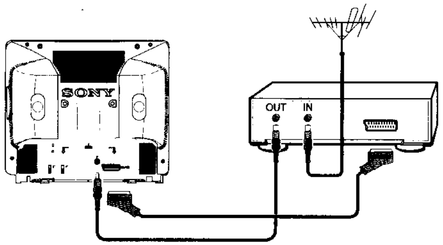
Connecting the Aerial

(If you connect a VCR, skip to step 2).
Connect an external aerial to the socket ╥ K.



Step 2

Connecting a VCR



We recommend that you tune in the VCR signal to programme number "0".
For details see "Presetting Channels Manually" on page 13.

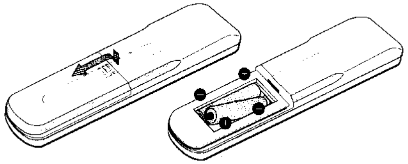
Step 3

Connecting the Mains Plug

Connect the mains plug of the TV set to the electrical outlet (220-240 V AC, 50 Hz).

Step 4

Inserting the Batteries into the Remote Commander



Always remember to dispose of used batteries in an environmental friendly way.

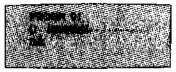
Step 5

Remote Commander Overview

Refer to Symbol	Effect	Refer to Page
❶ 🔇	Sound on/off button	10
❷ ⊜	Teletext on button	17
❸ ▢	TV button / TV power on Teletext off button	10 17
❹ 1... 9, 0	Number buttons	10
❺ -/--	Double digit entering button	10
❻ ⊞	Screen Format	10
❼, ❽, ⓮, ⓯ ⇧⇩ − +	MENU: Cursor buttons to operate Menu functions TELETEXT: Fastext / TOP Text buttons	11 17
❾ ◿ +/-	Volume control	10
❿ ⏻	Standby button	10
⓫ ⇥ ⊕	Input mode button Teletext: Freezing the subpage	18 17
⓬ ⓘ ⓘ	On screen display button Teletext: Reveal button	10 17
⓭ MENU	Menu on/off button	11
⓰ PROGR +/- ⊕, ⊖	Programme buttons Teletext: Page up/down buttons	10 17

Step 6

Presetting Channels Automatically



TV searches for all available channels.
If manual tuning is preferred see Menu option - Presetting Channels Manually.

1 Depress power switch ⏻ **A** on TV set.

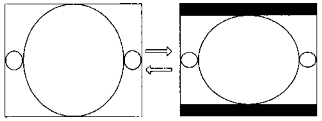
2 Press and hold ⏭ **E** on TV set for 2 seconds.
Auto tuning starts and screen shows.

- When Auto tuning stops, the programme position 1 is displayed.
- Programme names are automatically taken from Teletext if available. With that function, you can easily identify which channel you are watching.

TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the Remote Commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes).

To	Press
Switch on	• ⏼ A on TV
Switch off temporarily	• ⏻ ❿ *TV is now in standby mode, ⏻ indicator B on TV lights.*
Switch on again	• ▭ ❸, PROGR +/- ⓰ C or any number button ❹
Switch off completely	• ⏼ A on TV *To save energy we recommend switching off completely when TV is not in use.*
Select programmes	• PROGR +/- ⓰ C or number buttons ❹ *For double digit numbers press -/-- ❺ then the number e.g. For 23, press -/-- ❺ then 2 and 3.*
Display the programme number	• ⓘ ⓬ *Press again to make programme number disappear.*
Adjust the volume	• ◢+/- ❾ D
Mute the sound	• 🔇 ❶ *Press again to restore sound.*
View video input	• ⇥ ⓫ F *Press again to return to TV programme.*
View programmes in 16:9 mode	• ⇕ ❻ *Press again to return to 4:3 mode.*

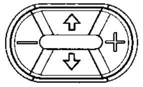


Use the following buttons on Remote Commander to control Menu screen.

1 Press MENU ⓭ to switch the Menu Screen on/off.

MENU

2 Use the coloured buttons as follows:



Green ❼
Scroll up

Red – ❽
decrease/select

Yellow + ⓮
increase/confirm(OK)

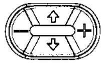
Blue ⓯
Scroll down

Adjusting the Picture and Sound

1 Press MENU ⓭.

MENU

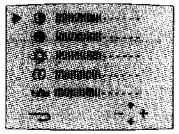
2 Press green ❼ or blue ⓯ to select ● (Picture) or ♪ (Sound) and press yellow ⓮ (OK) to confirm.



3 Press green ❼ or blue ⓯ to select the item you wish to change.

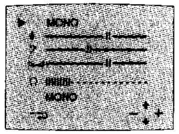
PICTURE CONTROL

Symbol	Item	- Effect	+
◑	• Picture	Less	More
◕	• Colour	Less	More
☼	• Brightness	Darker	Brighter
◫	• Sharpness	Softer	Sharper
◺◿	• Hue control (only for NTSC video signals)	Reddish	Greenish



SOUND CONTROL

Symbol	Item	- Effect	+
	• MONO/STEREO	A: Channel 1 Stereo Mono	B: Channel 2
𝄞	• Treble	Less	More
𝄢	• Bass	Less	More
◣◢	• Balance	More left	More Right
🎧	• Headphones:		
	Volume	Less	More
	MONO/STEREO	A: Channel 1 Stereo/Mono	B: Channel 2

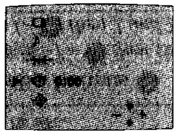


4 Press red ❽ or yellow ⓮ to change levels.

5 Press MENU ⓭ to return to normal TV screen.

- To reset to factory preset picture levels, press green ❼ or blue ⓯ to select →•← and press yellow (OK) ⓮.
- To return to the Main menu, select ⊐ and press yellow.

Using the Sleep Timer



The TV may be set to switch to the standby mode automatically after a length of time chosen by you. You may set the time in 30 minutes steps up to 4 hours.

1 Press MENU ⓭.

2 Press green ❼ or blue ⓯ to select ⏻

3 Press red ❽ or yellow ⓮ to set time delay.
0.00 (OFF) 0.30 1.00 1.30 .... 4.00

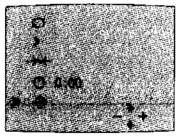
4 Press MENU ⓭ to return to normal TV screen.
When watching TV, press ⊞ ⓬ to display time remaining.

Presetting Channels Manually

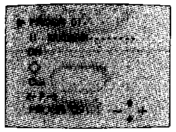
Up to 100 programme positions are available for presetting channels.

1 Press MENU ⓭.

2 Press green ❼ or blue ⓯ to select ⇨ and press yellow (OK) ⓮.



3 Select programme number using PROGR +/- ⓰ 🅲 or the number buttons ❹.



4 Press green ❼ or blue ⓯ to select TV system (BG or DK) if necessary and press red ❽ or yellow ⓮ to change TV system.

5 Press green ❼ or blue ⓯ to select tuning bar (IIIII...) and press red ❽ or yellow ⓮ to start channel search. When a channel is found the tuning bar stops moving and you see the picture.

6 If you want to store, press green ❼ or blue ⓯ to select ◇ and press yellow (OK) ⓮. If you don't want to store, press red ❽ or yellow ⓮ to continue search.

7 Repeat steps 3 to 6 for all other channels.

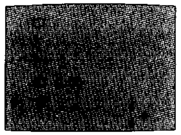
8 Press MENU ⓭ to return to normal TV screen.

Skipping Programme Positions

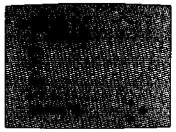
You can skip unused programme positions when selecting channels with the PROGR +/- ⓰🅲 buttons. You can still select them, however, using the number buttons ❹.

1 Press MENU ⓭.

2 Press green ❼ or blue ⓯ to select ⇨ and press yellow ⓮.



3 Select programme number you want to skip using PROGR +/- ⓰ 🅲 or number buttons ❹.



4 Press green ❼ or blue ⓯ to select Coo and press yellow (OK) ⓮.

5 Press green ❼ or blue ⓯ to select ◇ and press yellow (OK) ⓮ to store.

6 Repeat steps 3 to 5 for other unused programme positions.

7 Press MENU ⓭ to return to normal TV screen.

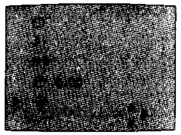
Fine-Tuning Channels

You can fine tune a stored channel.

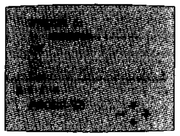
1 Select the channel you wish to fine tune.

2 Press MENU ⓭.

3 Press green ❼ or blue ⓯ button to select ⇨ and press yellow (OK) ⓮.



4 Press green ❼ or blue ⓯ to select ←F→ and use red ❽ or yellow ⓮ to adjust tuning.



5 Press green ❼ or blue ⓯ to select ◇ and press yellow (OK) ⓮ to store.

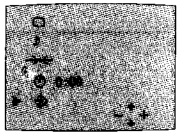
6 Press MENU ⓭ to return to normal TV screen.

Exchanging Programme Positions

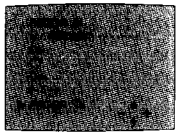
After tuning you may wish to rearrange the programme positions.

1 Press MENU ⓭.

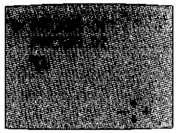
2 Press green ❼ or blue ⓯ button to select ⇨ and press yellow (OK) ⓮.



3 Press green ❼ or blue ⓯ to select PROGR ⇅ and press yellow (OK) ⓮.



4 Press red ❽ or yellow ⓮ to select the first programme position.



5 Press the blue ⓯ button.

6 Press red ❽ or yellow ⓮ to select the second programme position.

7 Press blue ⓯ to select ⇅ and press yellow (OK) ⓮ to exchange.

8 Repeat steps 4 to 7 for other programme positions.

9 Press MENU ⓭ to return to normal TV screen.

Viewing Teletext

Teletext is an information service broadcast by TV stations.

1 Select the channel which carries the teletext service you wish to receive.

2 Press ⊜ ❷ to switch on teletext.

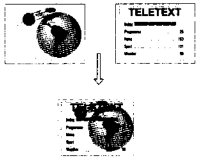
3 Input three digits for the page number using the programme number buttons ❹ or ⊞/⊟ ⓰ (next or previous page).

4 Press ▢ ❸ to switch off teletext.

Teletext errors may occur if the broadcasting signals are weak.

Using Other Teletext Functions

Superimposing teletext on the TV



Press ⊜ ❷ once in teletext mode or twice in TV mode to superimpose teletext on the TV screen.
Press ⊜ ❷ again to cancel superimposing.

Freezing a teletext subpage

Press ⊜ ⓫ (HOLD) to freeze the subpage. Freezing the page prevents the information that is displayed from being updated.
Press ⊜ ⓫ to cancel HOLD and allow update to continue.

Revealing concealed information (eg: answers to a quiz).

Press (?) ⓬ to reveal information.
Press again to conceal the information.

Using colour buttons to access pages (Fastext)

When the colour coded menu appears at the bottom of a page, press the colour button (green, red, yellow or blue) ❼❽⓮⓯ to access the corresponding page.

Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV. Refer to the illustrations on the back flap page of this manual.

Symbol	**Acceptable input signals**
⇨/⇨2 🅶 🅷 ⇨S 🅸	• Normal audio/video and S video through the phono jacks.
⇔/⇨ 🅻	• Normal audio/video and RGB through Euro AV connector.

Note: Make sure not to switch on the equipments connected to the front connectors ⇨2 🅷 and ⇨S 🅸 at the same time.

Selecting the Input

Press ⇨ ⓫ 🅵 repeatedly to select the desired video source.
Press ▭ ❸ to return to normal TV operation.

Connecting Headphones

Plug in the headphones to the ∩ 🅹 socket on the front of the TV set.

Troubleshooting

Here are some simple solutions to the problems which affect the picture and sound.

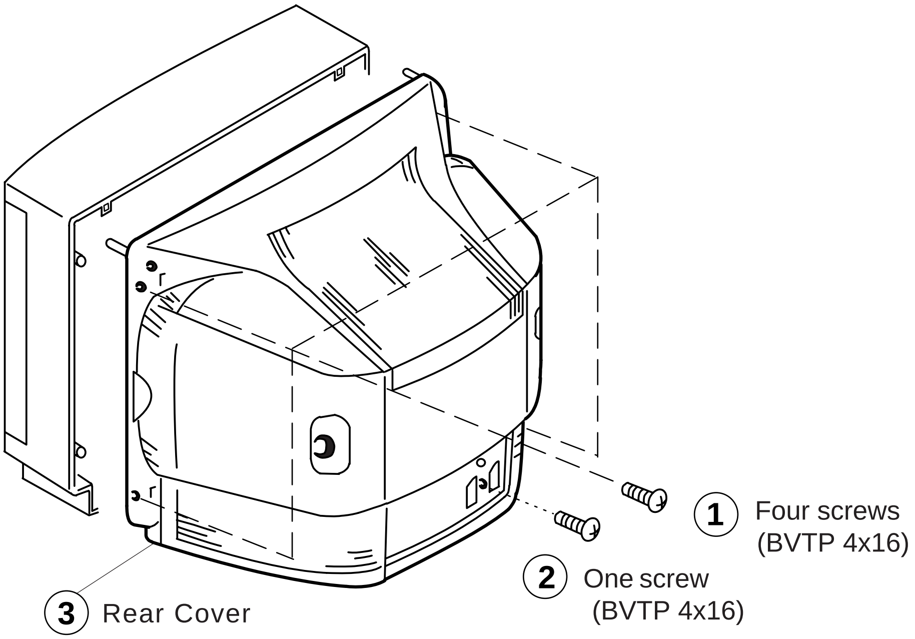
Problem	**Solution**
No picture, screen is dark, no sound	• Plug the TV in. • Press ⏼ 🅰 on the TV. • If ⏻ indicator 🅱 is on press ▭ ❸ or the programme number ❹ on the remote commander. • Check the aerial connection. • Check that the video source is on. • Turn the TV off for 3 or 4 seconds and then turn it on again using ⏼ 🅰.
Poor or no picture (screen is dark, sound is good)	• Press MENU ⓭ and adjust brightness picture and colour balance level.
Picture moved to the left when watching a RGB video source	• Press ⇨ ⓫ repeatedly to select ⇨.
Good picture, no sound	• Adjust the volume ⊿ +/− ❾ 🅳. • Disconnect any headphones. • If 🔇 is displayed on the screen, press 🔇 ❶.
No colour on colour programmes	• Press MENU ⓭ and adjust colour balance. • Press MENU ⓭ and reset to factory settings.
Distorted picture when changing programmes or selecting teletext	• Turn off the equipment connected to the 21-pin connector 🅻.
Remote commander does not function	• Replace the batteries.

- **If you continue to have these problems, have your TV serviced by qualified personnel.**
- **NEVER open the casing yourself.**

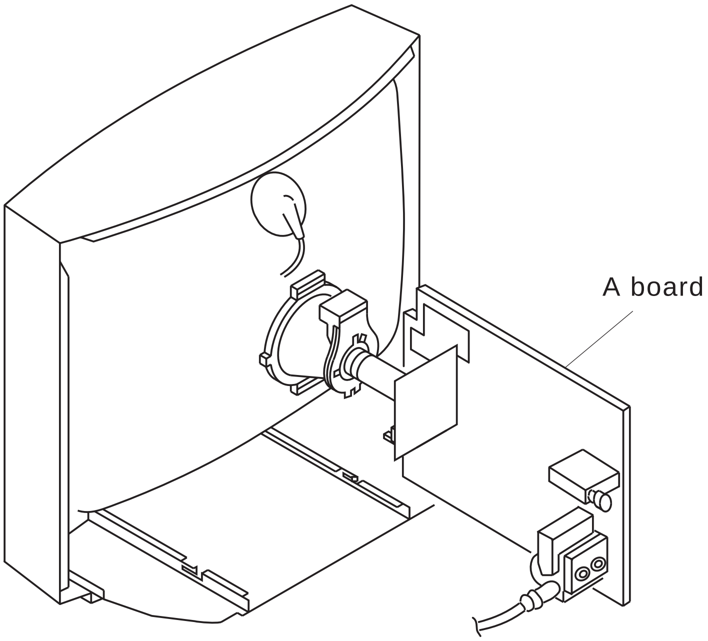
SECTION 2

DISASSEMBLY

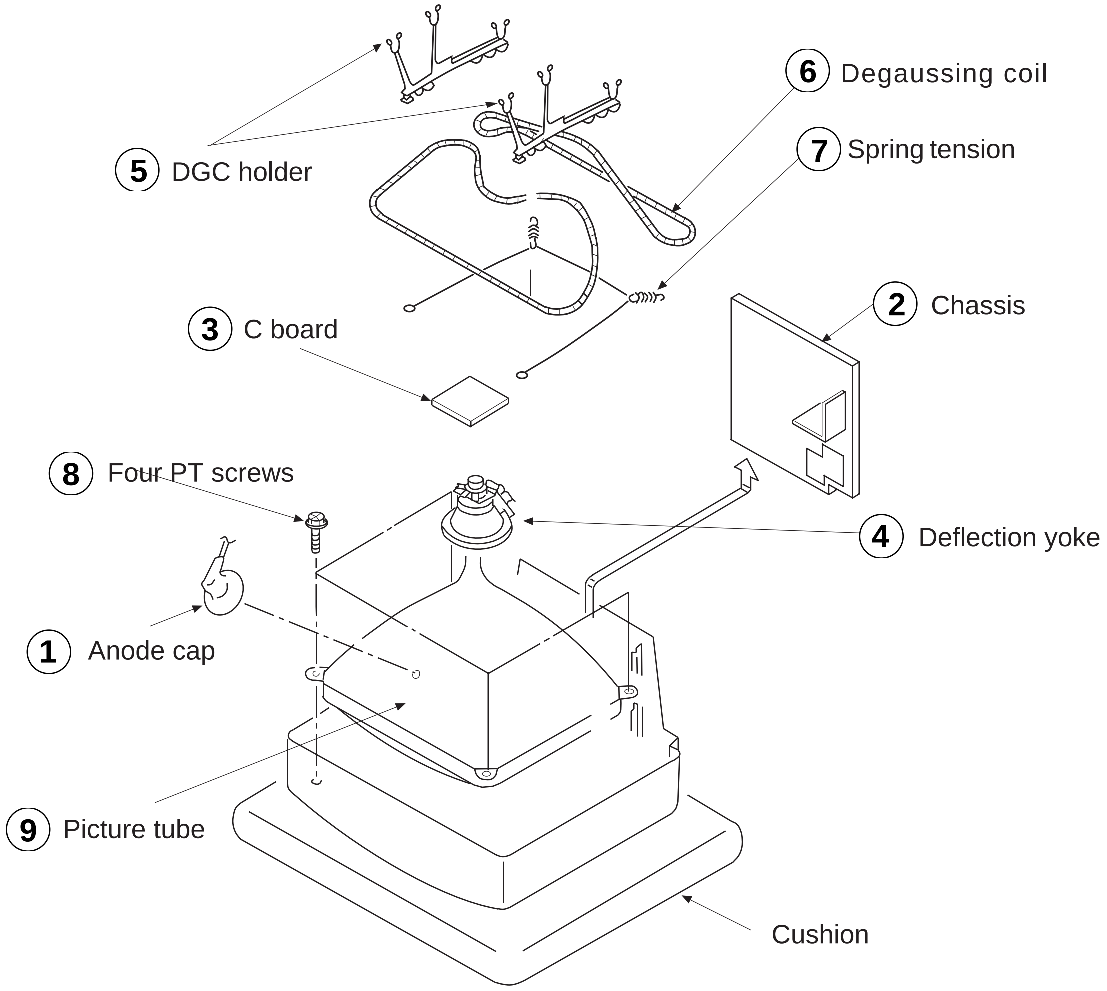
2-1. REAR COVER REMOVAL


① Four screws
(BVTP 4x16)
② One screw
(BVTP 4x16)
③ Rear Cover

2-2. SERVICE POSITION



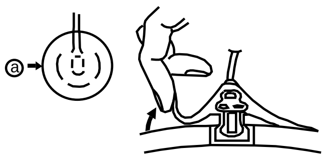
2-3. PICTURE TUBE REMOVAL


⑥ Degaussing coil
⑦ Spring tension
⑤ DGC holder
② Chassis
③ C board
⑧ Four PT screws
④ Deflection yoke
① Anode cap
⑨ Picture tube
Cushion

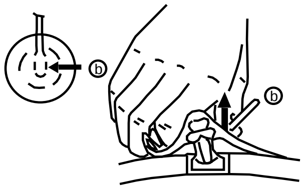
• REMOVAL OF ANODE-CAP

Note: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

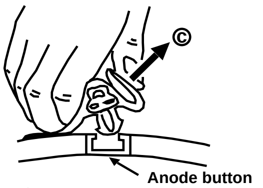
*** REMOVING PROCEDURES.**



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ


ⓒ
Anode button

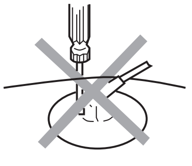
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

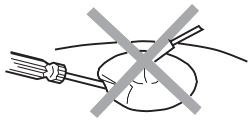
• HOW TO HANDLE AN ANODE-CAP

① Don't damage the surface of anode-cap with sharp shaped material !

② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.

③ Don’t turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.





SECTION 3
SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with the rated power supply voltage, unless otherwise noted.

The Contrast and Brightness controls should be set as follows unless otherwise noted:

CONTRAST control 80%
(or Normal by commander)
BRIGHTNESS control 50%

Perform the adjustments in the following order:

1. Beam Landing
2. Convergence
3. Screen (G2), Drive, White Balance, Sub Colour and Sub Brightness.
4. Focus

Note: Test Equipment Required.

1. Colour bar/Pattern Generator
2. Degausser
3. DC Power Supply
4. Digital multimeter
5. Oscilloscope

Preparation:

- In order to reduce the influence of external magnetic forces on the picture tube, face the TV set in an easterly or westerly direction.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser.

3-1. BEAM LANDING

Demagnetize with a degausser.

1. Input an all white raster signal from the pattern generator.
   CONTRAST ⎫ normal
   BRIGHTNESS ⎭
2. Switch the raster signal of the pattern generator to Red.
3. Move the deflection yoke backward, and adjust with the purity control so that Red is at the centre and the Blue and Green are evenly spaced at the sides. see (Fig. 3-1 - 3-3)
4. Move the deflection yoke forward, and adjust so that the entire screen becomes Red. (Fig. 3-1)
5. Switch the raster signal to Blue and then Green to confirm the condition.
6. When the position of the deflection yoke has been determined, tighten it with the deflection yoke mounting screw.
7. When the landing at the corners is not correct, adjust by using disk magnets. (Fig. 3-4)

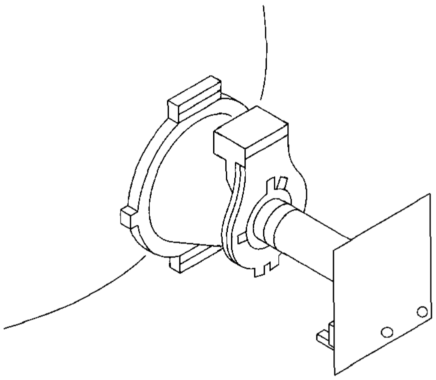


Fig. 3-1

Fig. 3-2

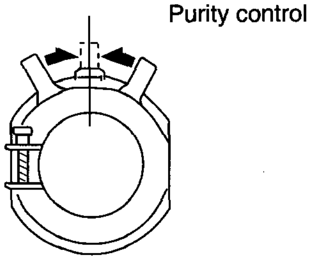


Fig. 3-3

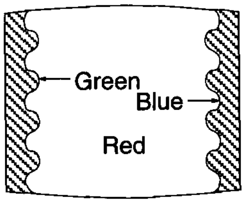
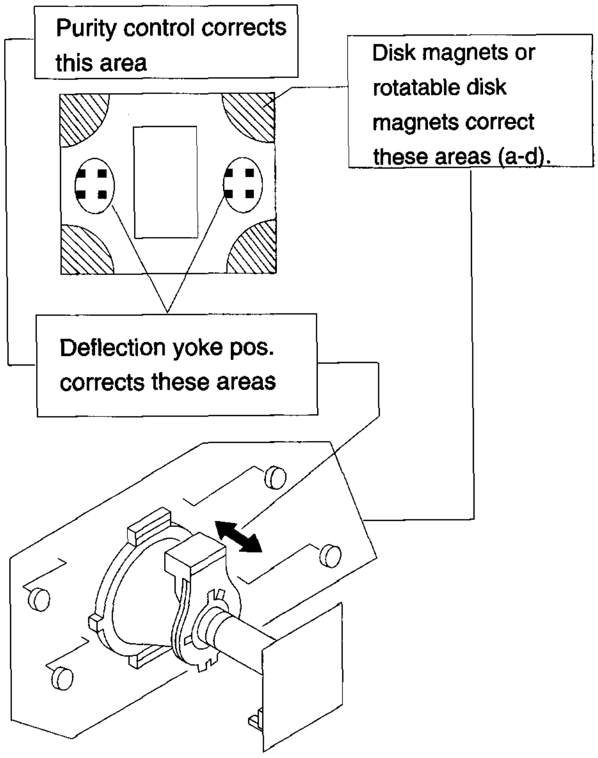


Fig. 3-4

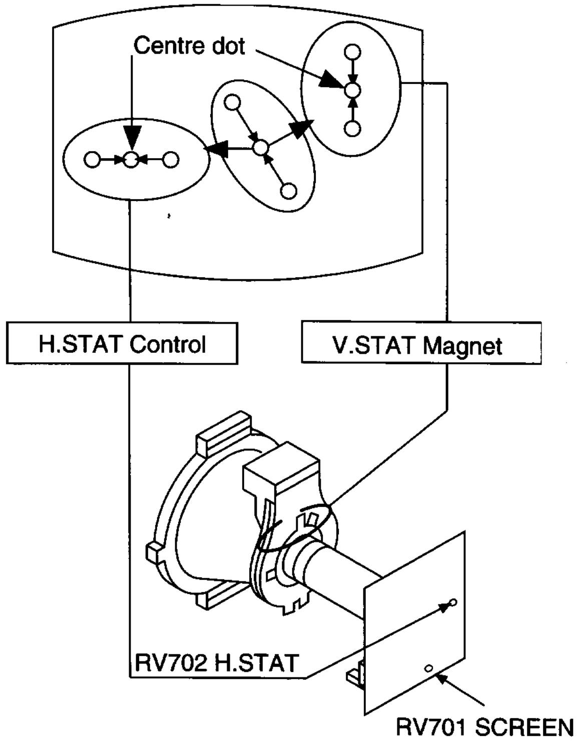

Purity control corrects this area
Disk magnets or rotatable disk magnets correct these areas (a-d).
Deflection yoke pos. corrects these areas

3-2. CONVERGENCE

Preparation:

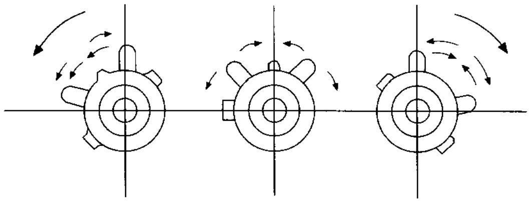
- Before starting, perform FOCUS, H.SIZE, and V.SIZE adjustments.
- Set the BRIGHTNESS control to minimum.
- Input a dot pattern from the pattern generator.

(1) Horizontal and Vertical Static Convergence

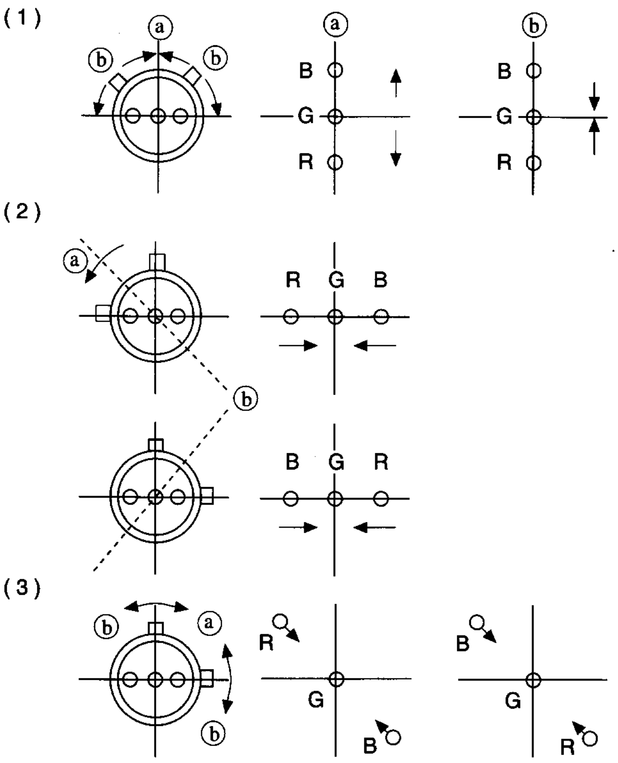


1. Adjust the H.STAT control to converge the Red, Green and Blue dots at the centre of the screen. (Horizontal movement)
2. Adjust the V.STAT magnet to converge the Red, Green and Blue dots at the centre of the screen. (Vertical movement)

- If the horizontal dots cannot coincide with variable range of the H.STAT convergence, adjust together with the V.STAT convergence while tracking.
  (Adjust the convergence by tilting the V.STAT convergence or by opening or closing the V.STAT convergence.)



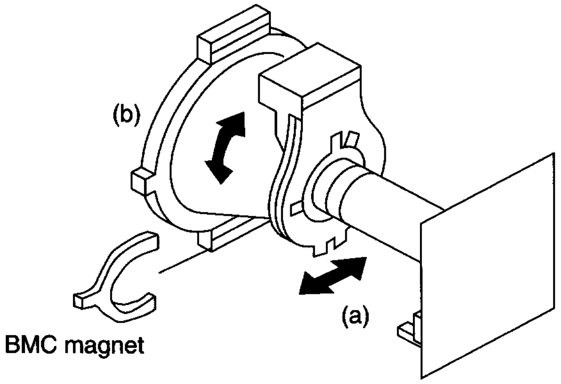
3. When the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the Red, Green and Blue dots move as shown below.



If the Red and Blue dots do not converge with the Green dots, perform the following steps.

1. Move the BMC magnet (a) to correct for insufficient H.static convergence.
2. Rotate the BMC magnet (b) to correct for insufficient V.static convergence.

In either case, repeat the Beam Landing Adjustment.

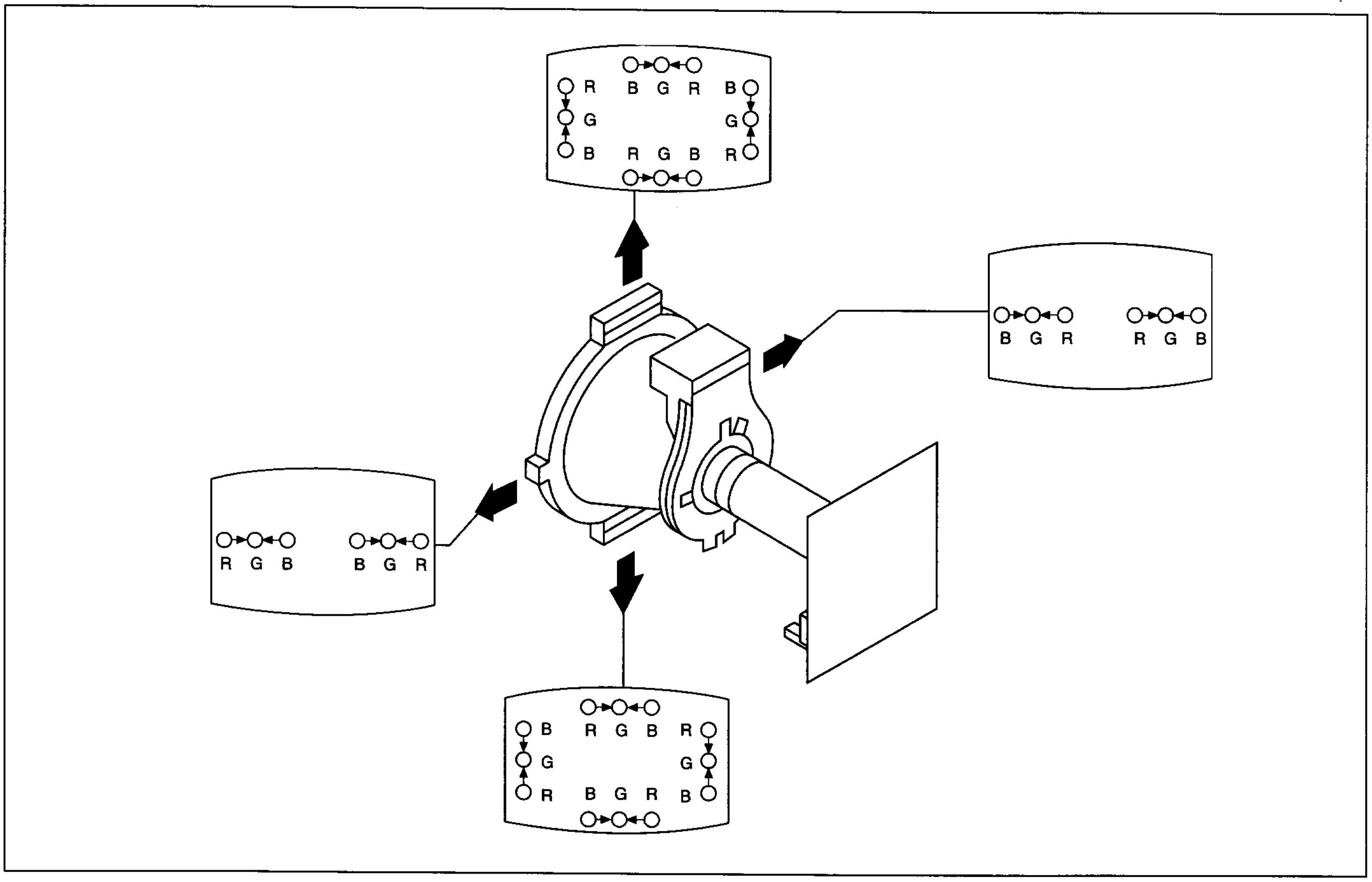


(2) Dynamic Convergence Adjustment

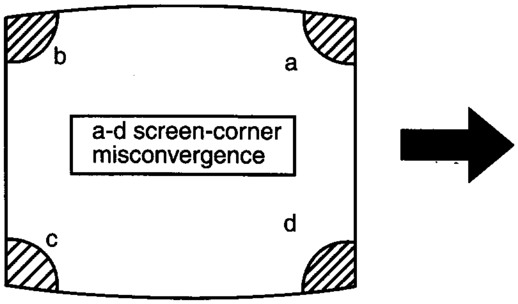
Preparation:

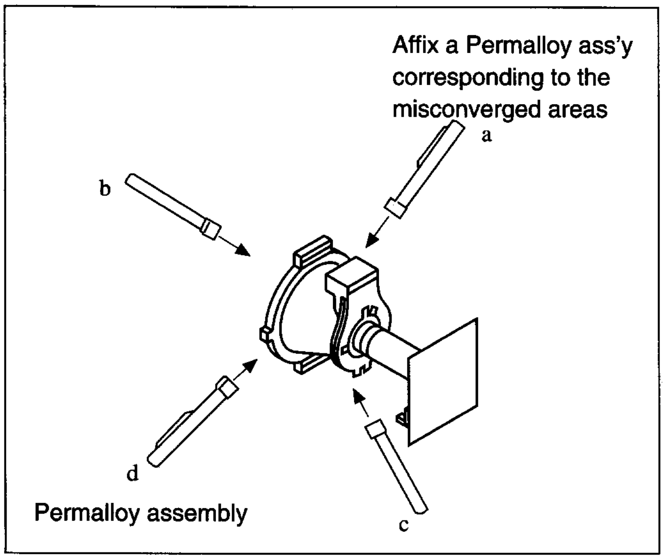
- Before starting, perform the Horizontal and Vertical static convergence adjustment.

1. Slightly loosen the deflection yoke screw.
2. Remove the deflection yoke spacers.
3. Move the deflection yoke for best convergence as shown below.
4. Tighten the deflection yoke screw.
5. Install the deflection yoke spacers.

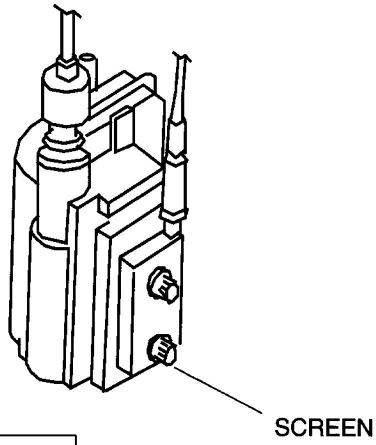

R B G R B
G G
B R G B R
B G R R G B
R G B B G R
B R G B R
G G
R B G R B

(3) Screen-corner Convergence.


b
a
a-d screen-corner misconvergence
c
d


Affix a Permalloy ass'y corresponding to the misconverged areas
a
b
d
c
Permalloy assembly

3-3. SCREEN (G2), DRIVE, WHITE BALANCE, SUB COLOUR and SUB BRIGHTNESS.

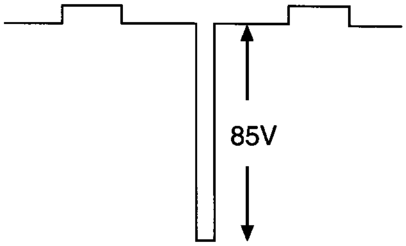


Screen (G2) setting

1. Input a 0 IRE (Black Level) signal from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 38.
3. Adjust the SCREEN VR until the Down arrow is displayed.
4. Adjust the SCREEN VR until the Down arrow just disappears.
5. Press the TV Button on the Remote Commander to store the data.

Drive Level

1. Input a Video signal containing a small area of 100% white on a black background.
2. Connect an oscilloscope to Pin ⑩ of J701 (R OUT) on the C Board.
3. Set the Picture to maximum using "Test""Test" and 01.
4. Enter into the Service mode (Adjust Menu).
5. Using the Blue and Green buttons select "RED HWB".
6. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform has an amplitude of 85V.

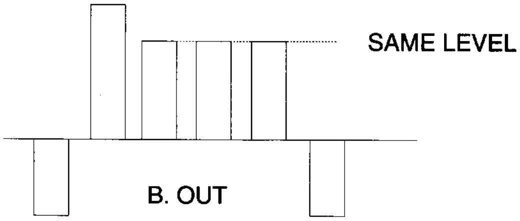


White Balance Adjustment

1. Input an all white pattern from the pattern generator.
2. Adjust the Colour and Brightness controls to the standard level.
3. Enter into the Service Mode.
4. Adjust the Green HWB and Blue HWB so that the White Balance becomes optimum.

Sub Colour Adjustment

1. Input a PAL colour bar pattern from the pattern generator.
2. Connect an oscilloscope to Pin ⑧ of J701 (B OUT) on the C Board.
3. Enter into the Service Mode "Test""Test" and 22.
4. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform becomes as follows :



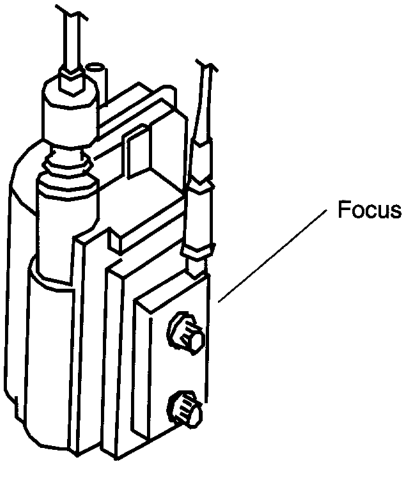
Note : If the TV is able to receive PAL and SECAM transmissions, repeat the above procedure using a Secam colour bar signal.

Sub Brightness Adjustment

1. Input a Philips pattern from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 23.
3. Using the Red and Yellow buttons on the Remote Commander adjust until the 0 IRE of the grey scale and the cut off are only slightly visible on the screen.

3-4. FOCUS

1. Receive a television broadcast.
2. Normalize the picture setting.
3. Adjust the focus control on the flyback transformer to focus the screen centre area properly.
   Bring only the centre area of the screen into focus, the magenta-ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



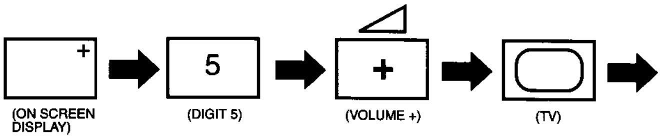
SECTION 4
CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied Remote Control Commander RM-836.

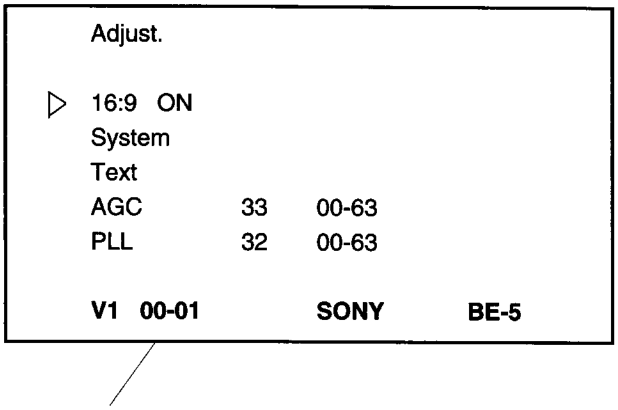
HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power of the set and enter into stand-by mode.
2. Press the following sequence of buttons on the Remote Control Commander.



"TT-- " will appear in the top right corner of the screen Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.



```
    Adjust.

 ▷  16:9  ON
    System
    Text
    AGC         33     00-63
    PLL         32     00-63

    V1  00-01          SONY       BE-5
```

Software version

4. Press the Blue (Next) or Green (previous) buttons to select the adjustment item from the table.
5. Press the Yellow (+) or Red (-) buttons to change the data as required.
6. Turn off the power to quit the service mode when adjustments are completed.

Range of adjustments available from the on screen menu system.

Adjustment	Set	Range
V size	21	0 - 63
V breth	32	0 - 63
Pin amp	12	0 - 63
Para. tilt	43	0 - 63
V linear	42	0 - 63
Corner corr	05	0 - 63
H size	34	0 - 63
V pos	00	0 - 63
H phase	42	0 - 63
Blue	26	0 - 63
Green	32	0 - 63
Red	42	0 - 63
HV blk 1	00	0 - 63
HV blk 2	00	0 - 63
V cent	06	0 - 63
Zwei max	36	0 - 63
zwei min	18	0 - 63

4-2. TEST MODE 2:

TT -- Mode is available by pressing the Test button twice, O.S.D 'TT --' appears. The functions described below are available by pressing two digits. To release the 'TT --' mode, press 0 twice, press 'TEST', press 'TV' or switch the TV into Stand-by mode.

00	Switch 'TT—' Mode off.
01	Set picture level to maximum.
02	Set picture level to minimum.
03	Set volume to 35%.
04	Set volume to 50%.
05	Set volume to 65%.
06	Set volume to 80%.
07	Ageing condition (picture max., brightness max.).
08	Shipping condition (Analog values are RESET to factory setting, Prog 1 is selected, TT—mode switched off, Vol = 35%).
09	Dummy.
10	No function.
11	Dummy
12	Dummy.
13	Dummy.
14	Dummy.
15	Read factory setting from ROM to NVM - Reads Volume, Brightness, Picture, Hue, Sharpness and Colour values from ROM to the actual used values (Last Power Memory).
16	Save actual used values as reset values.
17	Enable / Disable Sharpness Operation.
18	Dummy.
19	RGB priority.
20	No function.
21	No function.
22	Sub Colour (Pal / Secam Different Stores)
23	Sub Brightness.
24	RGB priority on.

25	Destination Systems DKE.
26	Destination Systems I/U.
27	Destination System I/I'.
28	Destination BG only.
29	Dummy.
30-31	No function.
32	Picture level to 50%
33-35	No function.
36	Audio mute ON.
37	OSD off.
38	Enter G2 adjustment mode.
39	Sub-brightness
40	No function.
41	Re-initialise NVM.
42	Dummy.
43	Re-initialise Geometry settings.
44-47	Dummy
48	Set NVM testbyte to 44h in NVM.
49	Erase NVM testbyte
50	No function.
51	Toggle 60/100 programs.

Note : For Test Modes 41 - 51, it is necessary to ensure that the TV is set to Prog 59.

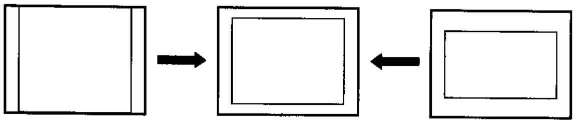
DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the service mode.
2. Using the Blue or Green buttons select the Adjust item.
3. Press the Yellow button to enter the adjustment submenu.
4. Select and adjust each item in order to obtain the optimum image.

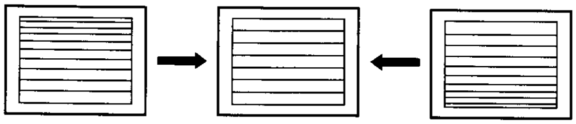
See Note on page 23

Adjustment	Set	Range
V size	21	0 - 63
V breth	32	0 - 63
Pin amp	12	0 - 63
Para. tilt	43	0 - 63
V linear	42	0 - 63
Corner corr	05	0 - 63
H size	34	0 - 63
V pos	00	0 - 63
H phase	42	0 - 63
Blue	26	0 - 63
Green	32	0 - 63
Red	42	0 - 63
HV blk 1	00	0 - 63
HV blk 2	00	0 - 63
V cent	06	0 - 63
Zwei max	36	0 - 63
zwei min	18	0 - 63

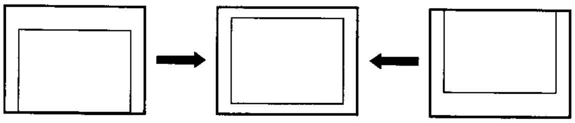
VERT, AMPL



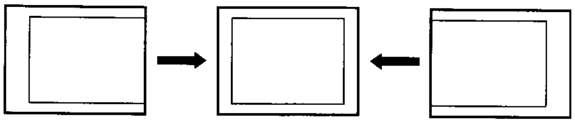
V, LINEAR



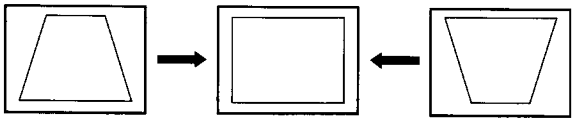
V, CENTRE



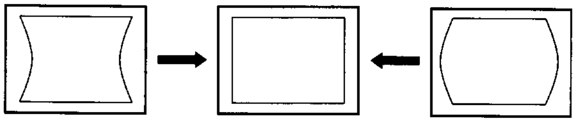
H, CENTRE



PAR TILT

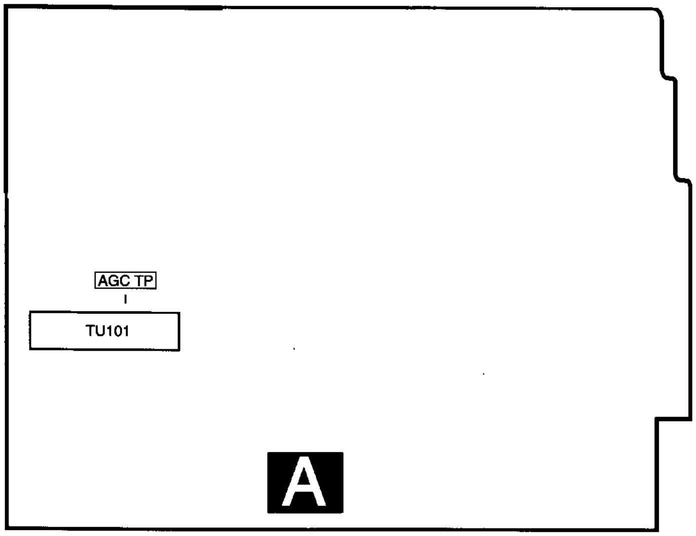


PAR AMP



AGC ADJUSTMENT

1. Receive a signal of 63dBuV / 75 ohm terminated via the tuner socket.
2. Measure the voltage at AGC TP.
3. Adjust TU101 RV to obtain a voltage of 3.0 ± 0.3V.



- A Board Component Side -

4-3. BE-5 SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-5 chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to I^2C. In the event of one of these situations arising the software will first try to release the Bus if busy (Failure to do so will report with a continuous flashing LED) and then communicate with each relevant device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED by a Series of flashes which must be counted (See Table 1), Non fatal errors are reported with this method.

If a fatal error is found, the set will simply stay in whichever state it was when the error occurred, but if a non fatal error occurs the set will try to continue to operate.
To check error code it is necessary to use TV error display part number S-188-900-10.

Table 1

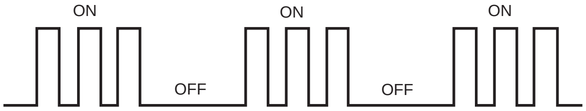
No. of Flashes	Notes	Error code	Description
-		00	No error.
2	(2)	30	Jungle nacks IIC bus1 transmisson.
3	(3)	31	Jungle FAULT (not OK) - flags.
4	(2)	32	Jungle - No H flyback.
-		33	Jungle - Stack overflow.
5	(4)	40	Sound Processor nacks IIC bus1 transmission.
6	(3)	90	Protection input: X-ray protection.
6	(3)	91	Protection error: No V synchro.
7	(1)	10	NVM nacks IIC bus0 transmission.
8	(3)	20	Tuner nacks IIC bus1 transmission.
9	(1)	01	General IIC bus1 error (SDA1 or SCL1 are being held low.)

(1) Only reported on mains power up.
(2) Reported on mains power up or exiting standby.
(3) Reported at any time and result in the set reverting to standby mode.
(4) Reported at any time and result in the set reverting to audio mute mode.

Note : Deflection System Adjustments should not be carried out whilst using an NTSC (60Hz) signal, or if the signal is unlocked.

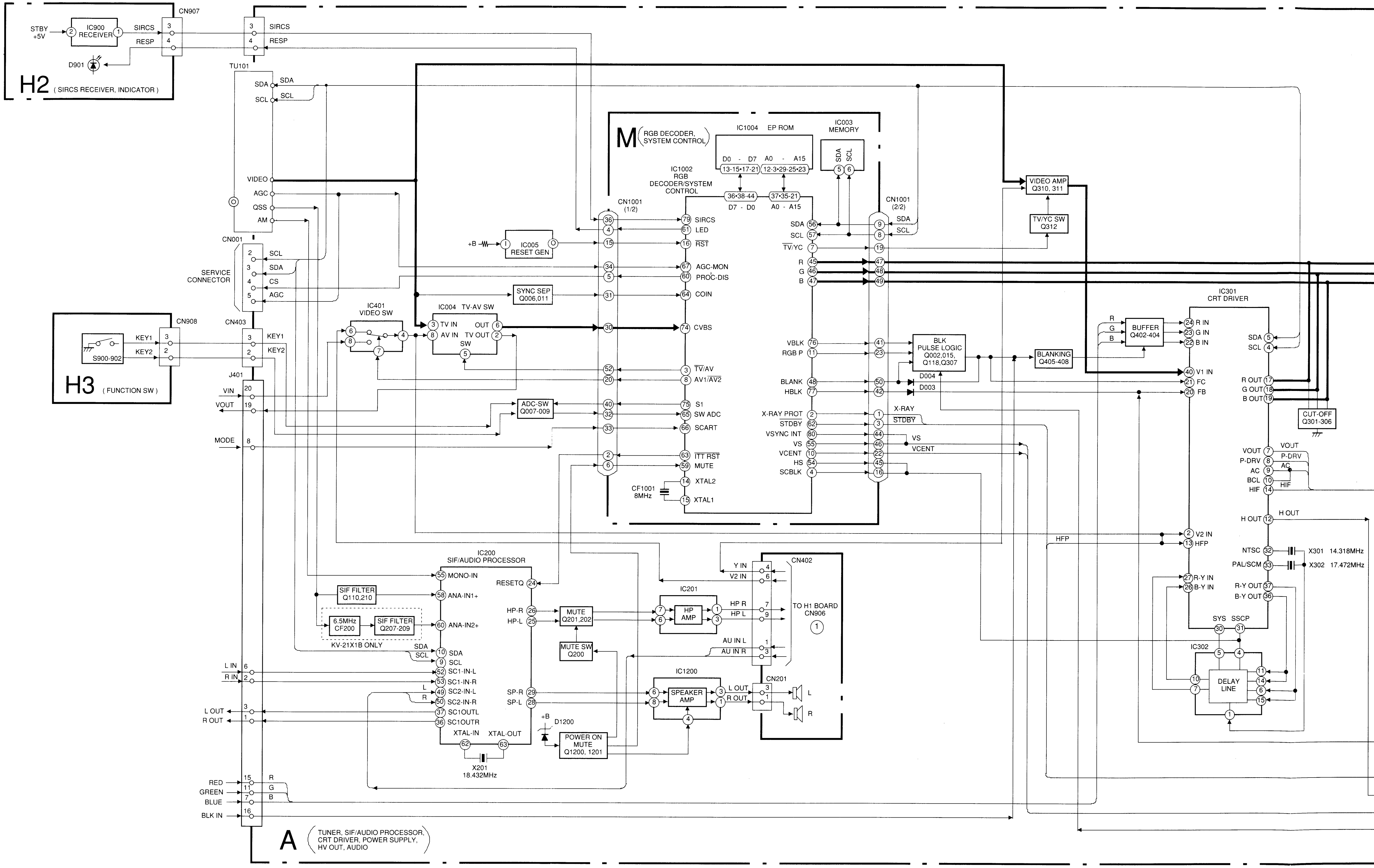
Flash Timing Example : e.g. error number 3

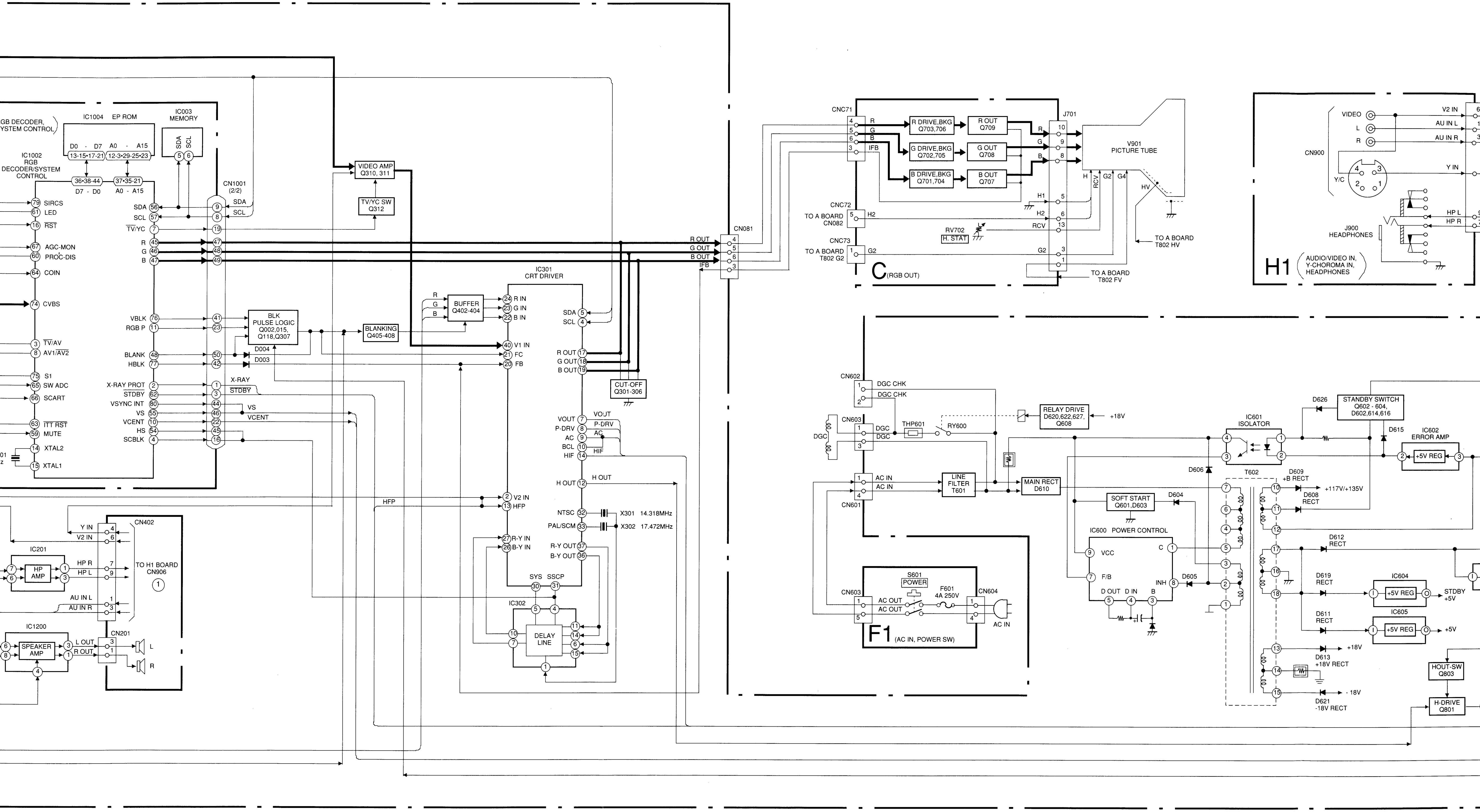
Stby LED

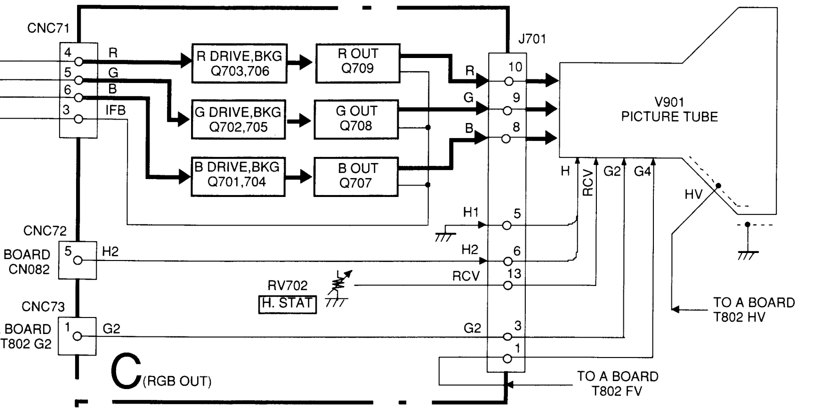


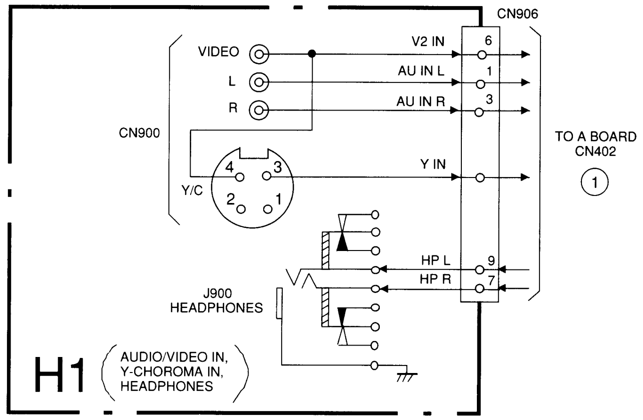
MEMO

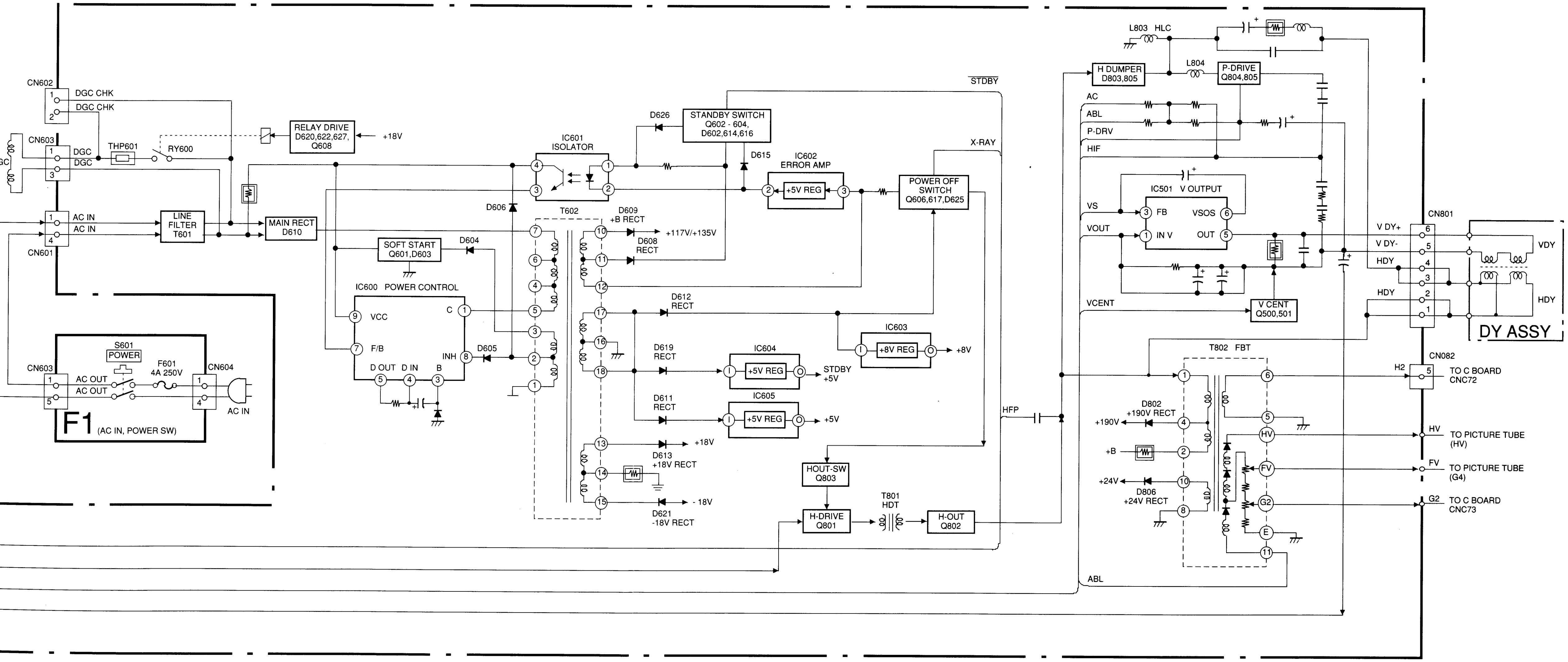
SECTION 5
DIAGRAMS
5-1. BLOCK DIAGRAM


H2 (SIRCS RECEIVER, INDICATOR)
STBY +5V
IC900 RECEIVER
SIRCS
RESP
D901
CN907
TU101
SDA
SCL
VIDEO
AGC
QSS
AM
CN001
SERVICE CONNECTOR
CS
H3 (FUNCTION SW)
S900-902
KEY1
KEY2
CN908
CN403
J401
VIN
VOUT
MODE
L IN
R IN
L OUT
R OUT
RED
GREEN
BLUE
BLK IN
R
G
B
IC401 VIDEO SW
IC004 TV-AV SW
TV IN
AV IN
OUT
TV OUT
SW
IC005 RESET GEN
+B
SYNC SEP Q006,011
ADC-SW Q007-009
M (RGB DECODER, SYSTEM CONTROL)
IC1004 EP ROM
IC003 MEMORY
D0 - D7
A0 - A15
IC1002 RGB DECODER/SYSTEM CONTROL
CN1001 (1/2)
CN1001 (2/2)
SIRCS
LED
RST
AGC-MON
PROC-DIS
COIN
CVBS
TV/AV
AV1/AV2
S1
SW ADC
SCART
ITT RST
MUTE
XTAL2
XTAL1
CF1001 8MHz
TV/YC
VBLK
RGB P
BLANK
HBLK
X-RAY PROT
STDBY
VSYNC INT
VS
VCENT
HS
SCBLK
X-RAY
VIDEO AMP Q310, 311
TV/YC SW Q312
BLK PULSE LOGIC Q002,015, Q118,Q307
D004
D003
BLANKING Q405-408
BUFFER Q402-404
IC301 CRT DRIVER
R IN
G IN
B IN
V1 IN
FC
FB
R OUT
G OUT
B OUT
CUT-OFF Q301-306
VOUT
P-DRV
AC
BCL
HIF
H OUT
V2 IN
HFP
NTSC
PAL/SCM
X301 14.318MHz
X302 17.472MHz
R-Y IN
B-Y IN
R-Y OUT
B-Y OUT
SYS SSCP
IC302
DELAY LINE
IC200 SIF/AUDIO PROCESSOR
MONO-IN
ANA-IN1+
ANA-IN2+
SC1-IN-L
SC1-IN-R
SC2-IN-L
SC2-IN-R
SC1OUTL
SC1OUTR
XTAL-IN
XTAL-OUT
X201 18.432MHz
RESETQ
HP-R
HP-L
SP-R
SP-L
SIF FILTER Q110,210
6.5MHz CF200
SIF FILTER Q207-209
KV-21X1B ONLY
MUTE Q201,202
MUTE SW Q200
IC201
HP AMP
HP R
HP L
IC1200
SPEAKER AMP
POWER ON MUTE Q1200, 1201
D1200
Y IN
V2 IN
AU IN L
AU IN R
CN402
TO H1 BOARD CN906
①
CN201
L OUT
R OUT
L
R
A (TUNER, SIF/AUDIO PROCESSOR, CRT DRIVER, POWER SUPPLY, HV OUT, AUDIO)

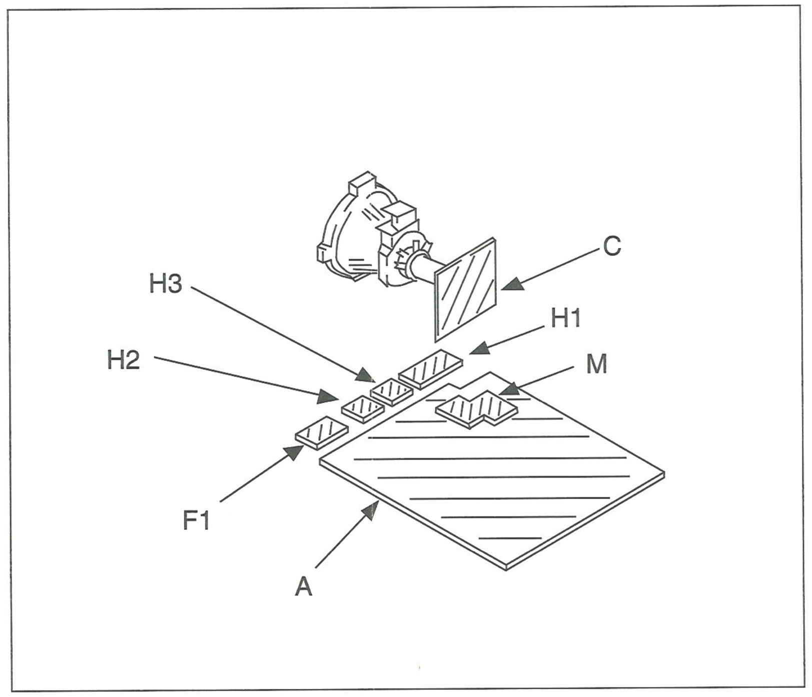

IC1004 EP ROM
IC003 MEMORY
RGB DECODER, SYSTEM CONTROL
IC1002 RGB DECODER/SYSTEM CONTROL
D0 - D7 A0 - A15
13·15·17·21 12·3·29·25·23
36·38·44 37·35·21
D7 - D0 A0 - A15
SDA SCL
CN1001 (2/2)
SIRCS
LED
RST
AGC-MON
PROC-DIS
COIN
CVBS
TV/AV
AV1/AV2
S1
SW ADC
SCART
ITT RST
MUTE
XTAL2
XTAL1
SDA
SCL
TV/YC
R
G
B
VBLK
RGB P
BLANK
HBLK
X-RAY PROT
STDBY
VSYNC INT
VS
VCENT
HS
SCBLK
X-RAY
STDBY
VS
VCENT
VIDEO AMP Q310, 311
TV/YC SW Q312
BLK PULSE LOGIC Q002,015, Q118,Q307
D004
D003
BLANKING Q405-408
BUFFER Q402-404
R IN
G IN
B IN
V1 IN
FC
FB
IC301 CRT DRIVER
SDA
SCL
R OUT
G OUT
B OUT
CUT-OFF Q301-306
VOUT
P-DRV
AC
BCL
HIF
H OUT
V2 IN
HFP
NTSC
PAL/SCM
X301 14.318MHz
X302 17.472MHz
R-Y IN
B-Y IN
R-Y OUT
B-Y OUT
SYS SSCP
IC302
DELAY LINE
HFP
CN402
Y IN
V2 IN
IC201
HP AMP
HP R
HP L
TO H1 BOARD CN906
①
AU IN L
AU IN R
IC1200
SPEAKER AMP
L OUT
R OUT
CN201
L
R
CN081
R OUT
G OUT
B OUT
IFB
CNC71
R
G
B
IFB
R DRIVE,BKG Q703,706
G DRIVE,BKG Q702,705
B DRIVE,BKG Q701,704
R OUT Q709
G OUT Q708
B OUT Q707
J701
V901 PICTURE TUBE
H
RCV
G2
G4
HV
H1
H2
RCV
G2
CNC72
TO A BOARD CN082
CNC73
TO A BOARD T802 G2
RV702 H. STAT
TO A BOARD T802 HV
TO A BOARD T802 FV
C (RGB OUT)
H1
VIDEO
L
R
V2 IN
AU IN L
AU IN R
CN900
Y/C
Y IN
HP L
HP R
J900 HEADPHONES
(AUDIO/VIDEO IN, Y-CHOROMA IN, HEADPHONES)
CN602
DGC CHK
DGC CHK
CN603
DGC
DGC
DGC
THP601
RY600
RELAY DRIVE D620,622,627, Q608
+18V
CN601
AC IN
AC IN
LINE FILTER T601
MAIN RECT D610
SOFT START Q601,D603
D604
IC600 POWER CONTROL
VCC
F/B
D OUT D IN
C
B
INH
D605
IC601 ISOLATOR
D626
STANDBY SWITCH Q602 - 604, D602,614,616
D615
IC602 ERROR AMP
+5V REG
D606
T602
D609 +B RECT
+117V/+135V
D608 RECT
D612 RECT
D619 RECT
IC604
+5V REG
STDBY +5V
D611 RECT
IC605
+5V REG
+5V
+18V
D613 +18V RECT
- 18V
D621 -18V RECT
HOUT-SW Q803
H-DRIVE Q801
CN603
S601 POWER
F601 4A 250V
CN604
AC OUT
AC OUT
AC IN
F1 (AC IN, POWER SW)


CNC71
R
G
B
IFB
R DRIVE,BKG Q703,706
G DRIVE,BKG Q702,705
B DRIVE,BKG Q701,704
R OUT Q709
G OUT Q708
B OUT Q707
J701
V901 PICTURE TUBE
H
RCV
G2
G4
HV
H1
H2
RCV
G2
CNC72
BOARD CN082
RV702
H. STAT
CNC73
BOARD T802 G2
TO A BOARD T802 HV
TO A BOARD T802 FV
C (RGB OUT)


CN906
VIDEO
L
R
CN900
Y/C
V2 IN
AU IN L
AU IN R
Y IN
HP L
HP R
TO A BOARD CN402
①
J900 HEADPHONES
H1 (AUDIO/VIDEO IN, Y-CHOROMA IN, HEADPHONES)


CN602
DGC CHK
DGC CHK
CN603
DGC
DGC
THP601
RY600
RELAY DRIVE D620,622,627, Q608
+18V
CN601
AC IN
AC IN
LINE FILTER T601
MAIN RECT D610
SOFT START Q601,D603
D604
IC600 POWER CONTROL
VCC
F/B
C
INH
D OUT
D IN
B
D605
D606
IC601 ISOLATOR
T602
D626
STANDBY SWITCH Q602 - 604, D602,614,616
D615
IC602 ERROR AMP
+5V REG
POWER OFF SWITCH Q606,617,D625
STDBY
X-RAY
D609 +B RECT
+117V/+135V
D608 RECT
D612 RECT
IC603
+8V REG
+8V
D619 RECT
IC604
+5V REG
STDBY +5V
D611 RECT
IC605
+5V REG
+5V
D613 +18V RECT
+18V
D621 -18V RECT
- 18V
HOUT-SW Q803
H-DRIVE Q801
T801 HDT
H-OUT Q802
HFP
S601 POWER
F601 4A 250V
CN603
AC OUT
AC OUT
CN604
AC IN
F1 (AC IN, POWER SW)
L803 HLC
L804
H DUMPER D803,805
P-DRIVE Q804,805
AC
ABL
P-DRV
HIF
IC501 V OUTPUT
VS
VOUT
FB
IN V
VSOS
OUT
V CENT Q500,501
VCENT
CN801
V DY+
V DY-
HDY
HDY
VDY
HDY
DY ASSY
T802 FBT
D802 +190V RECT
+190V
+B
+24V
D806 +24V RECT
HV
FV
G2
E
ABL
CN082
H2
TO C BOARD CNC72
TO PICTURE TUBE (HV)
TO PICTURE TUBE (G4)
TO C BOARD CNC73

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch : 5 mm
  Rating electrical power ¼ W

- ⊡ : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⫫ : earth - chassis.
- ⌗ : no mounted.

Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

Note : Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ⨳	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- ▬ : B+ bus.
- ⇨ : signal path. (RF)

A BOARD

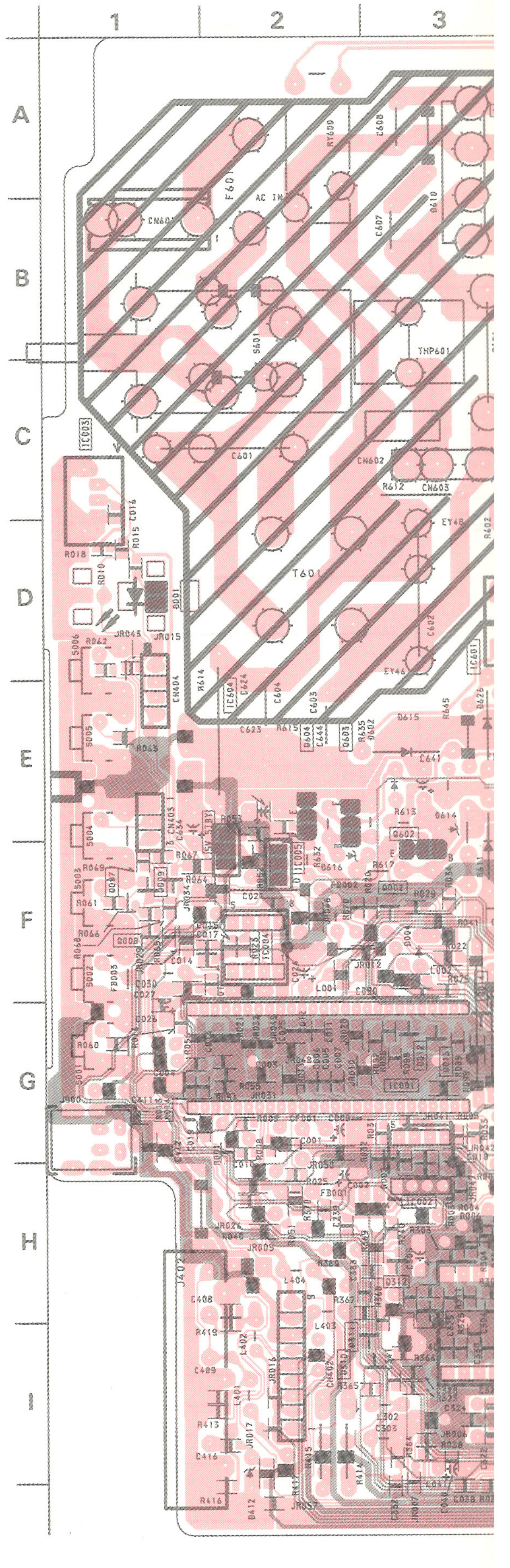
IC	
IC003	C-1
IC004	F-2
IC005	F-2
IC200	H-10
IC201	G-11
IC301	I-4
IC302	J-4
IC401	J-6
IC501	D-9
IC600	C-5
IC601	D-3
IC602	E-6
IC603	F-6
IC604	E-2
IC605	G-5
IC1200	G-7

TRANSISTOR	
Q002	F-3
Q006	F-10
Q007	F-1
Q008	F-1
Q009	F-1
Q011	G-9
Q012	G-3
Q013	G-3
Q014	G-3
Q015	I-7
Q107	G-10
Q110	F-11
Q118	G-12
Q200	H-7
Q201	G-10
Q202	G-10
Q204	H-11
Q205	G-11
Q207	J-9
Q208	J-9
Q209	J-10
Q210	J-9
Q300	H-4
Q301	I-5
Q302	I-5
Q303	I-5
Q304	I-5
Q305	H-5
Q306	H-5
Q307	F-8
Q310	I-2
Q311	I-2
Q312	H-3
Q402	G-13
Q403	H-12
Q404	H-12
Q405	G-12
Q406	G-12
Q407	H-12
Q408	G-12
Q500	E-12
Q501	E-12
Q601	C-4
Q602	F-3
Q603	E-2
Q604	E-2
Q606	F-6
Q608	A-6
Q617	E-7
Q801	C-7
Q802	C-9
Q803	F-8
Q804	B-7
Q805	B-8
Q1200	I-7
Q1201	H-7

DIODE	
D002	F-11
D003	G-5
D004	F-3
D005	G-4
D006	G-4
D007	G-3
D009	I-7
D011	E-8
D015	H-6
D201	H-11
D301	H-4
D302	H-5
D307	F-8
D308	F-9
D401	H-12
D402	H-12
D403	H-13
D404	H-12
D405	G-12
D406	G-3
D407	G-12
D408	I-12
D409	I-12
D410	I-12
D412	J-2
D415	H-12
D416	I-10
D417	I-10
D501	C-8
D602	E-3
D603	B-4
D604	C-4
D605	C-5
D606	C-4
D607	C-4
D608	E-5
D609	E-6
D610	A-3
D611	F-3
D612	F-4
D613	E-5
D614	F-3
D615	E-3
D616	F-2
D617	E-7
D619	F-3
D620	A-7
D621	E-4
D622	A-7
D625	F-7
D626	E-3
D627	A-6
D801	B-9
D802	A-10
D803	F-8
D805	D-10
D806	A-12
D807	C-7
D809	A-11
D1200	I-7

A TUNER, SIF/AUDIO PROCESSOR,
RGB DECODER, SYSTEM CONTROL,
POWER SUPPLY, HV OUT, AUDIO

A Board



A TUNER, SIF/AUDIO PROCESSOR,
RGB DECODER, SYSTEM CONTROL,
POWER SUPPLY, HV OUT, AUDIO

A Board

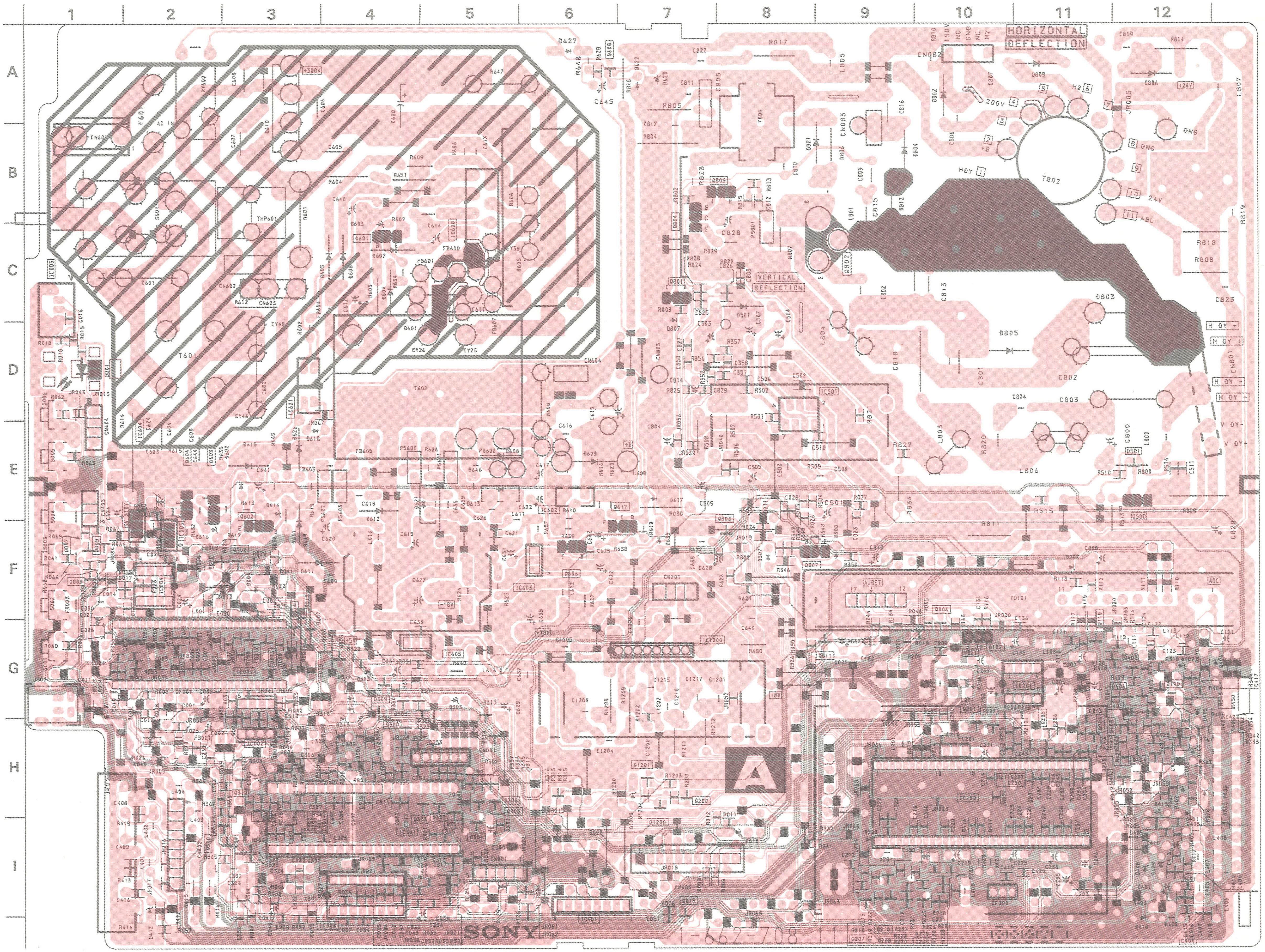
D

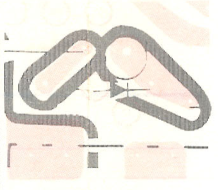
C-1
F-2
F-2
H-10
G-11
I-4
J-4
J-6
D-9
C-5
D-3
E-6
F-6
E-2
G-5
G-7

STOR

F-3
F-10
F-1
F-1
F-1
G-9
G-3
G-3
G-3
I-7
G-10
F-11
G-12
H-7
G-10
G-10
H-11
G-11
J-9
J-9
J-10
J-9
H-4
I-5
I-5
I-5
I-5
H-5
H-5
F-8
I-2
I-2
H-3
G-13
H-12
H-12
G-12
G-12
H-12
G-12
E-12
E-12
C-4
F-3
E-2
E-2
F-6
A-6
E-7
C-7
C-9
F-8
B-7
B-8
I-7
H-7

DIODE	
D002	F-11
D003	G-5
D004	F-3
D005	G-4
D006	G-4
D007	G-3
D009	I-7
D011	E-8
D015	H-6
D201	H-11
D301	H-4
D302	H-5
D307	F-8
D308	F-9
D401	H-12
D402	H-12
D403	H-13
D404	H-12
D405	G-12
D406	G-3
D407	G-12
D408	I-12
D409	I-12
D410	I-12
D412	J-2
D415	H-12
D416	I-10
D417	I-10
D501	C-8
D602	E-3
D603	B-4
D604	C-4
D605	C-5
D606	C-4
D607	C-4
D608	E-5
D609	E-6
D610	A-3
D611	F-3
D612	F-4
D613	E-5
D614	F-3
D615	E-3
D616	F-2
D617	E-7
D619	F-3
D620	A-7
D621	E-4
D622	A-7
D625	F-7
D626	E-3
D627	A-6
D801	B-9
D802	A-10
D803	F-8
D805	D-10
D806	A-12
D807	C-7
D809	A-11
D1200	I-7

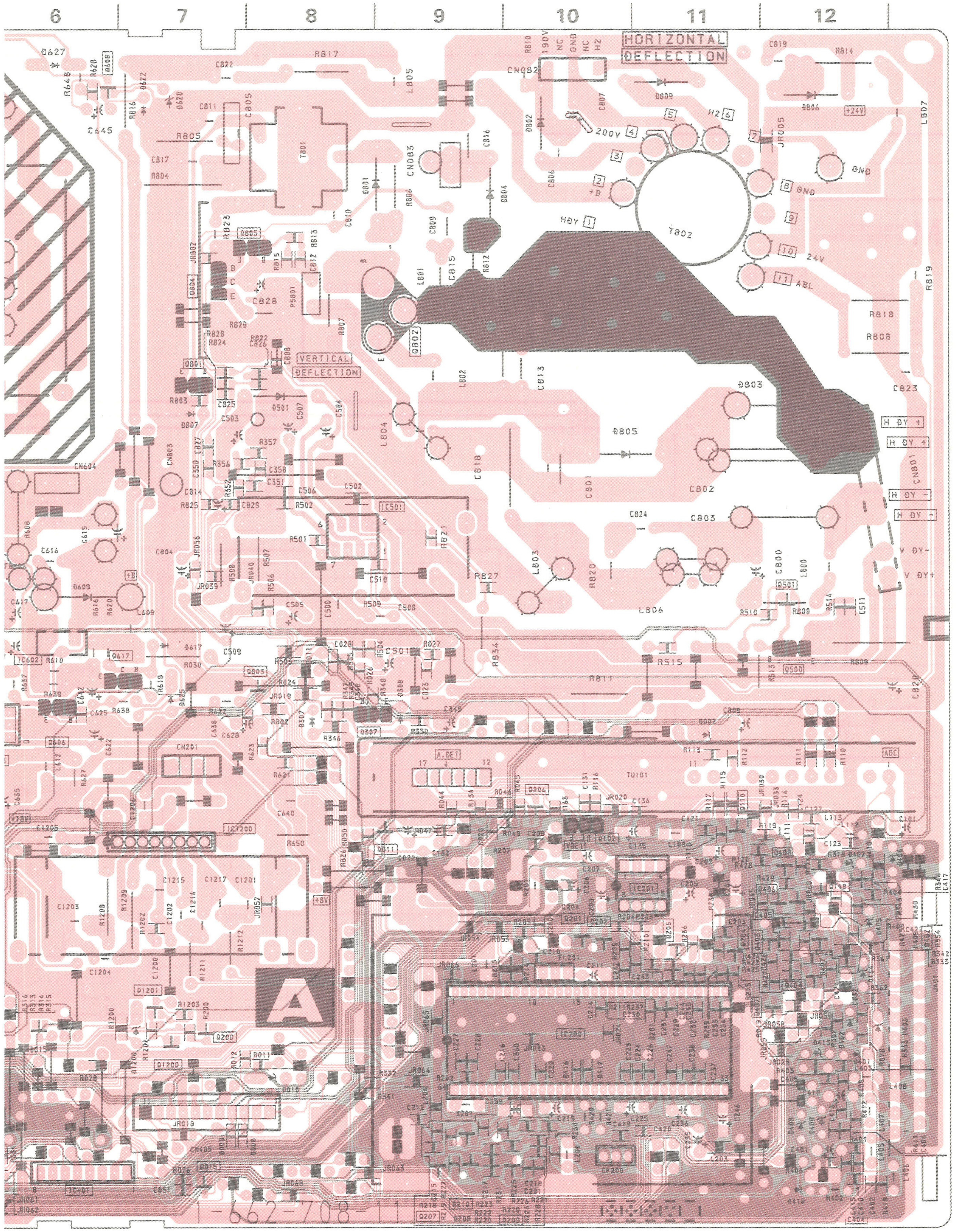


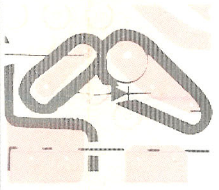


NOTE:
The circuit
600 Vp-p. C
inspection o

A BOARD * MARK

Model / Ref. No	21X1A	21X1
C215	—	100P
C349	—	22UF/5
IC200	MSP3400C-PP-C6	MSP3410B
R332	68K	68K
R357	68K	68K
TU101	TUVIF (AEP)	TUVIF (





NOTE:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

A BOARD TRANSISTOR TABLE

Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q002	-	5.0	-
Q006	4.6	0.7	4.8
Q007	-	5.0	0
Q008	5.0	5.0	4.5
Q009	0.1	5.0	4.5
Q011	0.6	5.0	0
Q012	-	5.0	-
Q013	-	5.0	-
Q014	-	5.0	-
Q110	4.6	8.0	4.0
Q118	-	-	0
Q201	-	-	0
Q202	-	-	0
Q204	4.7	8.0	4.0
Q205	4.6	8.0	4.0
Q210	3.5	8.0	2.9
Q300	0.3	0.6	0
Q301	0	2.0	0
Q302	0	2.1	0
Q303	0	2.2	0
Q304	0	2.0	0
Q305	0	2.1	0
Q306	0	2.2	0
Q310	1.7	5.0	3.0
Q311	3.6	5.0	3.0
Q312	-0.2	-	0
Q403	-	-	-
Q404	-	-	-
Q500	5.4	19.7	4.8
Q501	0.6	5.4	0
Q601	-0.3	-2.2	-2.6
Q602	68.0	8.0	68.4
Q603	0	67.7	0
Q604	0.6	0	0
Q608	-	15.8	0
Q801	0	120	0
Q802	-0.2	120	0
Q803	0.1	0.6	0
Q804	0.5	16.0	-
Q805	1.0	16.0	0.5
Q1201	3.5	7.0	2.8

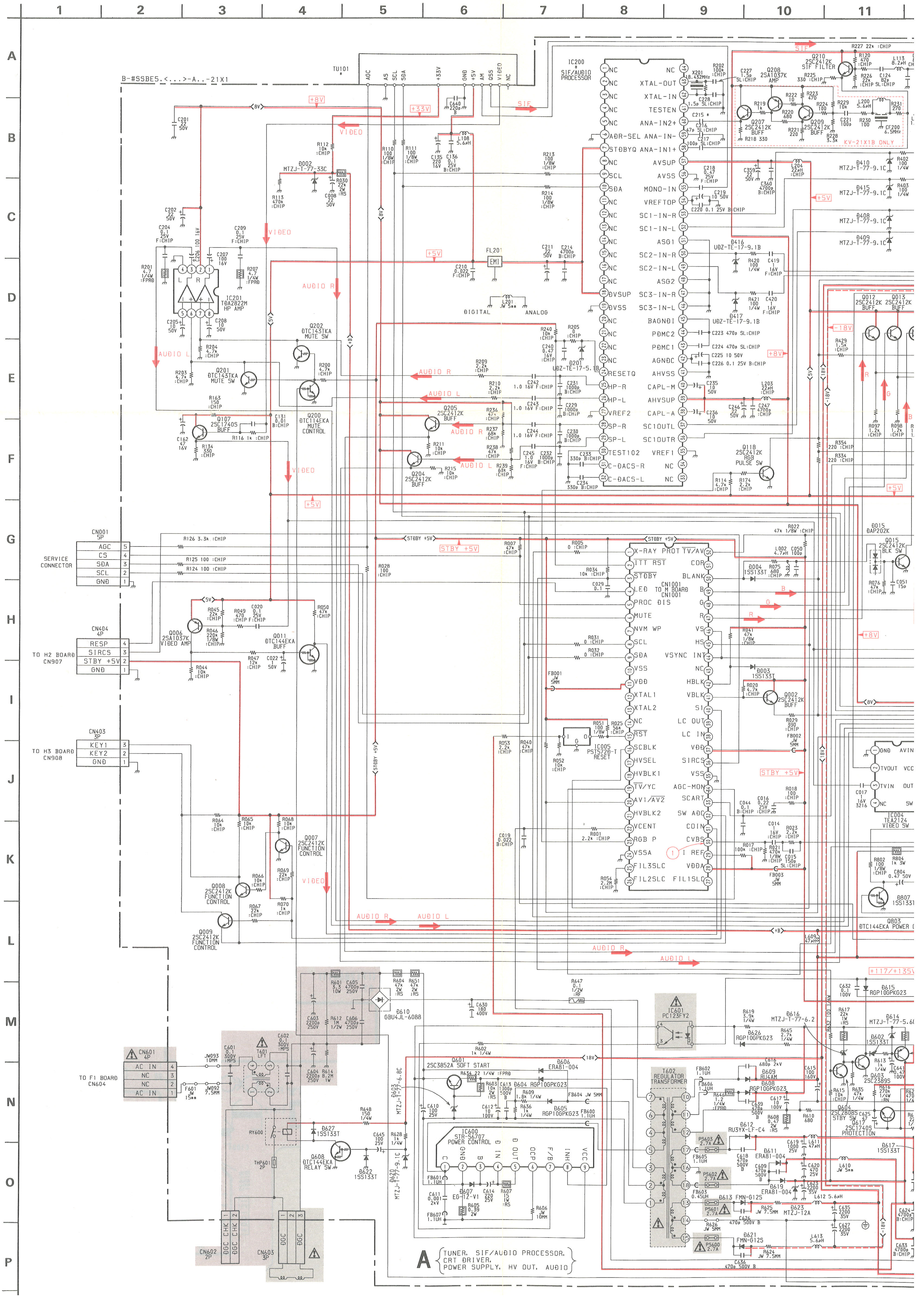
A BOARD IC VOLTAGE TABLE

IC Voltage Table

Ref No	Pin No	Voltage (V)	Ref No	Pin No	Voltage (V)
IC004	2	2.0	IC302	1	1.6
	3	2.2		2	4.7
	6	1.9		4	1.3
	7	5.0		6-7	1.4
	8	1.8		8	0.2
IC200	7	4.8		10-11	1.4
	9	3.1		13	4.7
	10	3.1		14-15	1.1
	18	4.8		16	1.6
	24	4.5	IC401	4	2.1
	31-32	3.8		6	3.0
	36-37	3.8		7	2.7
	38	7.0		8	3.0
	39	8.0	IC501	2	28.3
	40	7.0		3	1.4
	42-45	3.8		5	20.0
	49-50	3.8		6	28.6
	52-53	3.8		7	2.6
	54	2.6	IC1200	2	15.8
	55	3.8		4	7.0
	57	4.8		5	-16.0
	58-59	1.5			
	62-63	2.4			
IC201	1	3.5			
	2	8.0			
	3	3.5			
	5	0.5			
	8	0.5			
IC301	1	1.6			
	2	0.8			
	3	1.3			
	4-5	3.3			
	6	0.9			
	7	1.5			
	8	1.0			
	9	1.3			
	10	2.3			
	11	1.6			
	12	0.3			
	13	0.4			
	14	1.0			
	15	2.1			
	17-19	2.4			
	20	3.1			
	22-23	3.0			
	24	2.9			
	26-27	3.1			
	28	1.0			
	31	1.3			
	32-33	1.8			
	35	4.7			
	36	2.5			
	37	2.4			
	38	0.8			
	39	3.0			
	40	2.8			

A BOARD * MARK

Model / Ref. No	21X1A	21X1B	21X1D	21X1E	21X1K	21X1L	21X1R	21X1U
C215	—	100PF	—	—	—	—	—	—
C349	—	22UF/50V	—	—	—	—	—	—
IC200	MSP3400C-PP-C6	MSP3410B-PP-F7	MSP3400C-PP-C6	MSP3410B-PP-F7	MSP3400C-PP-C6	MSP3410B-PP-F7	MSP3400C-PP-C6	MSP3410B-PP-F7
R332	68K	68K	47K	68K	47K	47K	47K	47K
R357	68K	68K	47K	68K	47K	47K	47K	47K
TU101	TUVIF (AEP)	TUVIF (FR)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (AEP)	TUVIF (UK)


1
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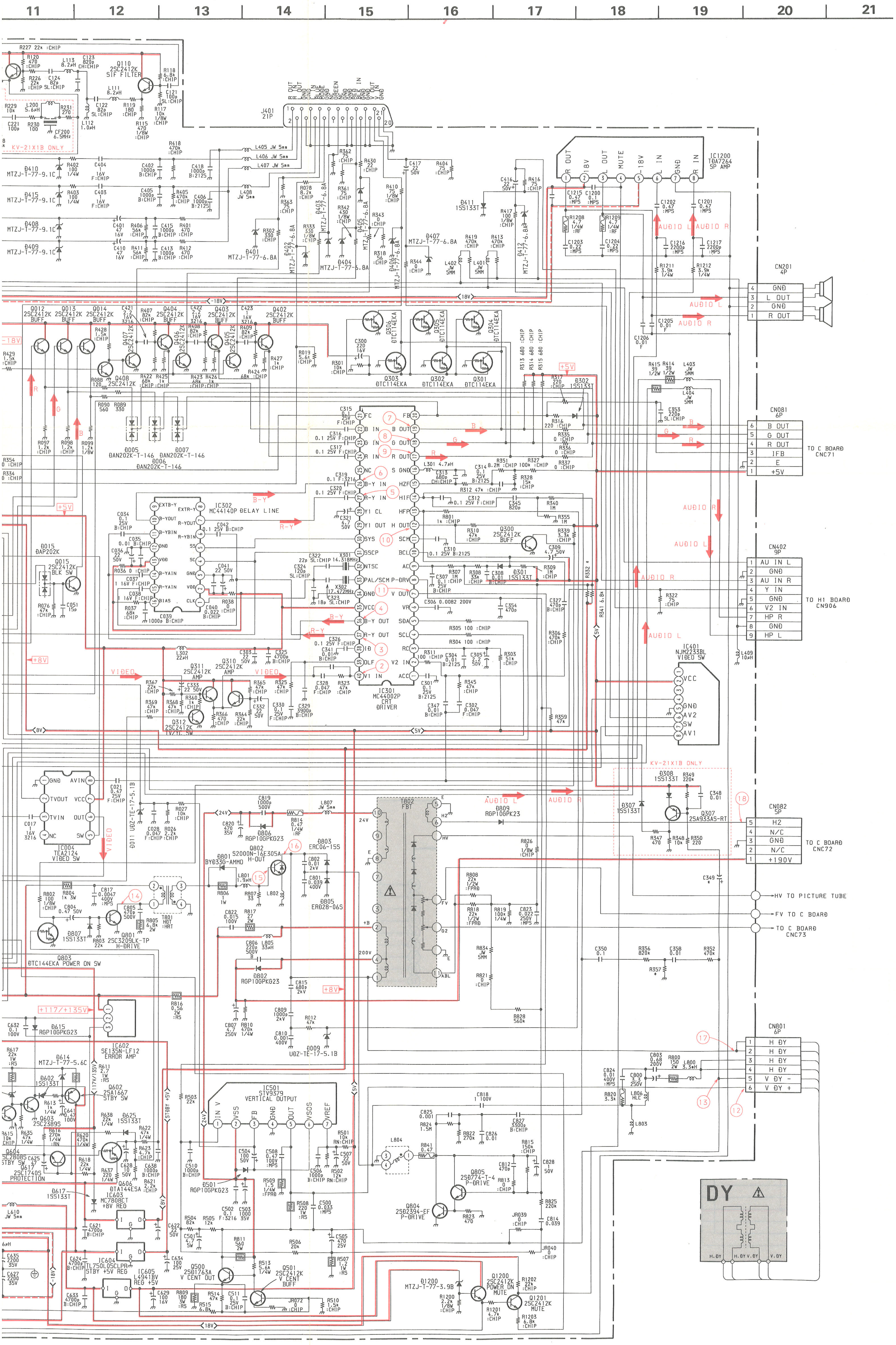
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
P
B-#SSBE5.<...>-A..-21X1
TU101
AGC
AS
SCL
SDA
+33V
GND
+5V
AM
QSS
VIDEO
NC
+8V
+33V
VIDEO
SIF
IC200
SIF/AUDIO PROCESSOR
NC
XTAL-OUT
XTAL-IN
TESTEN
ANA-IN2+
ADR-SEL
ANA-IN-
STBYQ
ANA-IN1+
AVSUP
SCL
AVSS
SDA
MONO-IN
VREFTOP
SC1-IN-R
SC1-IN-L
ASG1
SC2-IN-R
SC2-IN-L
ASG2
DVSUP
SC3-IN-R
DVSS
SC3-IN-L
BAGNDI
PDMC2
PDMC1
AGNDC
RESETQ
AHVSS
HP-R
CAPL-M
HP-L
AHVSUP
VREF2
CAPL-A
SP-R
SC1OUTL
SP-L
SC1OUTR
TEST102
VREF1
C-DACS-R
C-DACS-L
X201 18.432MHz
Q210 2SC2412K SIF FILTER
Q208 2SA1037K AMP
Q207 2SC2412K BUFF
Q209 2SC2412K BUFF
CF200 6.5MHz
KV-21X1B ONLY
D410 MTZJ-T-77-9.1C
D415 MTZJ-T-77-9.1C
D408 MTZJ-T-77-9.1C
D409 MTZJ-T-77-9.1C
D416 UDZ-TE-17-9.1B
D417 UDZ-TE-17-9.1B
D002 MTZJ-T-77-33C
IC201 TDA2822M HP AMP
FL201 EMI
DIGITAL
ANALOG
AUDIO R
AUDIO L
Q202 DTC143TKA MUTE SW
Q201 DTC143TKA MUTE SW
Q200 DTC114EKA MUTE CONTROL
Q107 2SC1740S BUFF
Q205 2SC2412K BUFF
Q204 2SC2412K BUFF
D201 UDZ-TE-17-5.1B
Q118 2SC2412K RGB PULSE SW
Q012 2SC2412K BUFF
Q013 2SC2412K BUFF
-18V
+5V
CN001 5P
SERVICE CONNECTOR
AGC
CS
SDA
SCL
GND
STBY +5V
X-RAY PROT
TV/AV
ITT RST
COR
STBY
BLANK
LED
CN1001 TO M BOARD CN1001
B
PROC DIS
G
MUTE
R
NVM WP
VS
SCL
HS
SDA
VSYNC INT
VSS
NC
VDD
HBLK
XTAL1
VBLK
XTAL2
SI
NC
LC OUT
RST
LC IN
SCBLK
VDD
HVSEL
SIRCS
HVBLK1
VSS
TV/YC
AGC-MON
AV1/AV2
SCART
HVBLK2
SW ADC
VCENT
COIN
RGB P
CVBS
VSSA
I REF
FIL3SLC
VDDA
FIL2SLC
FIL1SLC
IC1005 PST572D-T RESET
Q015 DAP202K
Q015 2SC2412K BLK SW
D004 1SS133T
D003 1SS133T
Q002 2SC2412K BUFF
CN404 4P
TO H2 BOARD CN907
RESP
SIRCS
STBY +5V
GND
Q006 2SA1037K VIDEO AMP
Q011 DTC144EKA BUFF
CN403 3P
TO H3 BOARD CN908
KEY1
KEY2
GND
Q008 2SC2412K FUNCTION CONTROL
Q007 2SC2412K FUNCTION CONTROL
Q009 2SC2412K FUNCTION CONTROL
GND
TVOUT
TVIN
NC
AVIN
VCC
OUT
SW
IC004 TEA2124 VIDEO SW
Q807 1SS133T
Q803 DTC144EKA POWER
+117/+135V
D610 GBU4JL-6088
IC601 PC123FY2
CN601 4P
AC IN
NC
TO F1 BOARD CN604
T601 LF1
RY600
THP601 2P
D627 1SS133T
Q608 DTC144EKA RELAY SW
D622 1SS133T
D620 MTZJ-T-77-9.1C
D603 MTZJ-T-77-6.8C
Q601 2SC3852A SOFT START
D606 ERA81-004
D604 RGP10GPKG23
D605 RGP10GPKG23
D607 EG-1Z-V1
IC600 STR-S6707 POWER CONTROL
C
GND
B
IN
OUT
OCP
F/B
INH
VCC
T602 REGULATOR TRANSFORMER
D615 RGP10GPKG23
D616 MTZJ-T-77-6.2
D614 MTZJ-T-77-5.6
D626 RGP10GPKG23
D602 1SS133T
D609 RU4AM
D608 RGP10GPKG23
Q603 2SC2389S
Q604 2SC2808S STBY SW
Q617 2SC1740S PROTECTION
D612 RU3YX-LF-C4
D611 ERA81-004
D619 ERA81-004
D613 FMN-G12S
D623 MTZJ-12A
D621 FMN-G12S
D617 1SS133T
PS603 2.7A
PS602 2.7A
PS601 2.7A
PS600 2.7A
CN602 2P
DGC CHK
CN603 3P
DGC

A TUNER, SIF/AUDIO PROCESSOR, CRT DRIVER, POWER SUPPLY, HV OUT, AUDIO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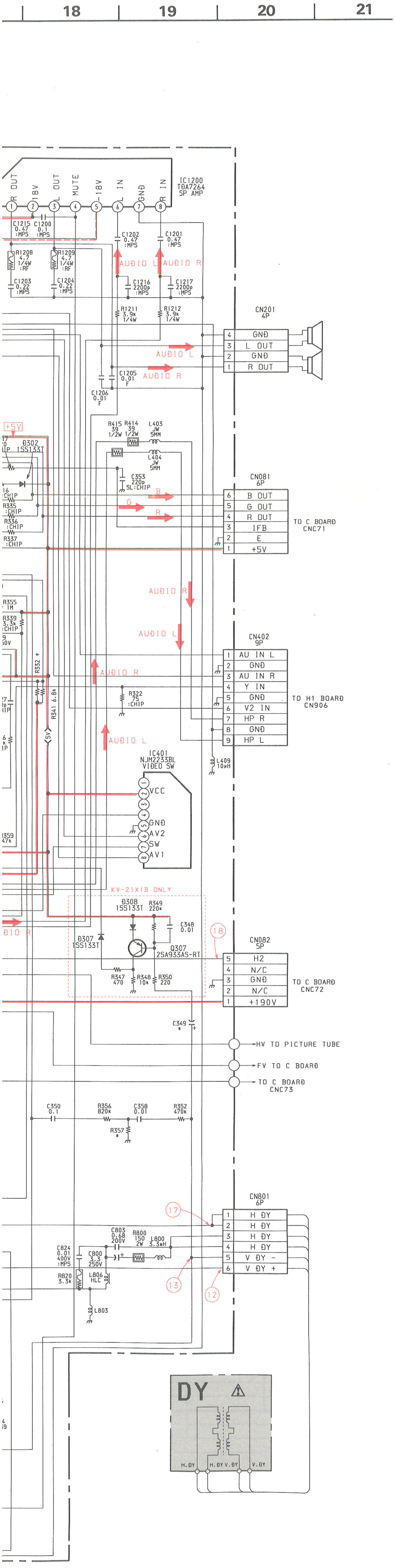
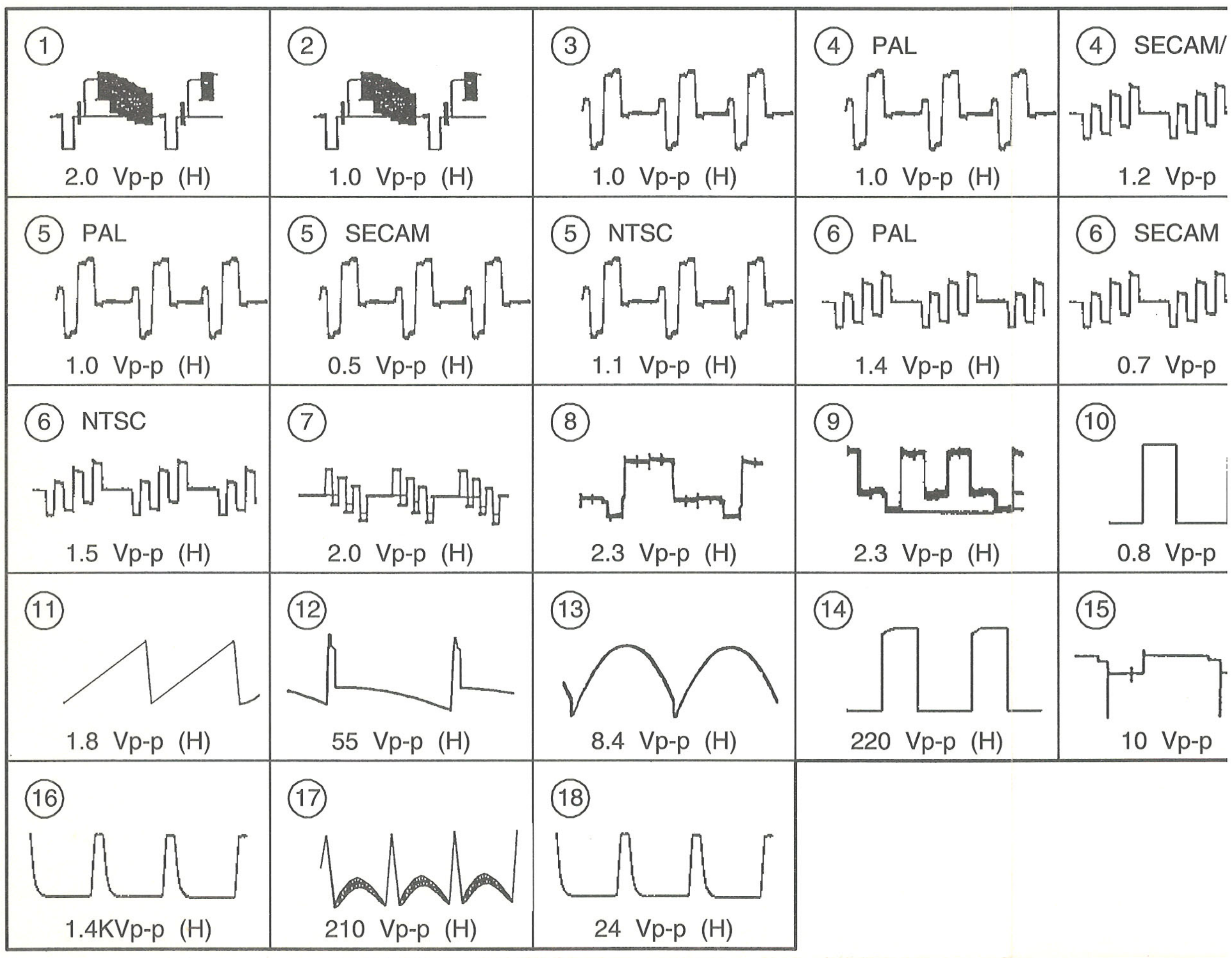
17
18
19
20
21
Q110 2SC2412K SIF FILTER
KV-21X1B ONLY
J401 21P
IC1200 TDA7264 SP AMP
CN201 4P
GND
L OUT
GND
R OUT
AUDIO L
AUDIO R
Q012 2SC2412K BUFF
Q013 2SC2412K BUFF
Q014 2SC2412K BUFF
Q404 2SC2412K BUFF
Q403 2SC2412K BUFF
Q402 2SC2412K BUFF
Q408 2SC2412K
Q306 DTC114EKA
Q305 DTC114EKA
Q304 DTC114EKA
Q303 DTC114EKA
Q302 DTC114EKA
Q301 DTC114EKA
D005 DAN202K-T-146
D006 DAN202K-T-146
D007 DAN202K-T-146
CN081 6P
B OUT
G OUT
R OUT
IFB
E
+5V
TO C BOARD CNC71
IC302 MC44140P DELAY LINE
IC301 MC44002P CRT DRIVER
Q300 2SC2412K BUFF
Q015 2SC2412K BLK SW
D015 DAP202K
CN402 9P
AU IN L
GND
AU IN R
Y IN
GND
V2 IN
HP R
GND
HP L
TO H1 BOARD CN906
IC401 NJM2233BL VIDEO SW
Q311 2SC2412K AMP
Q310 2SC2412K AMP
Q312 2SC2412K TV/TL SW
VIDEO
+5V
+8V
-18V
IC004 TEA2124 VIDEO SW
T802 FBT
Q802 S2000N-16E305A H-OUT
D801 BY033G-AMMO
D806 RGP10GKG23
D803 ERC06-15S
D805 ERD28-06S
D809 RGP10GPK23
Q801 2SC3209LK-TP H-DRIVE
Q803 DTC144EKA POWER ON SW
D802 RGP10GPK23
Q307 2SA933AS-RT
D307 1SS133T
D308 1SS133T
CN082 5P
H2
N/C
GND
N/C
+190V
TO C BOARD CNC72
HV TO PICTURE TUBE
FV TO C BOARD
TO C BOARD CNC73
+117/+135V
IC602 SE135N-LF12 ERROR AMP
Q602 2SA1667 STBY SW
Q603 2SC2389S
Q604 2SC2808S STBY SW
IC601 2SC1740S PROTECTION
Q606 DTA144ESA
IC603 MC7808CT +8V REG
IC604 TL750L05CLPR STBY +5V REG
IC605 L4941BV REG +5V
IC501 STV9379 VERTICAL OUTPUT
Q500 2SD1763A V CENT OUT
Q501 2SC2412K V CENT BUFF
Q805 2SD774-T-4 P-DRIVE
Q804 2SD2394-EF P-DRIVE
D1200 MTZJ-T-77-3.9B
Q1200 2SC2412K POWER ON MUTE
Q1201 2SC2412K MUTE
CN801 6P
H DY
H DY
H DY
H DY
V DY -
V DY +
DY
H.DY
H.DY V.DY
V.DY


18
19
20
21
R OUT
18V
L OUT
MUTE
-18V
L IN
GND
R IN
IC1200
TDA7264
SP AMP
C1215 0.47 :MPS
C1200 0.1 :MPS
C1202 0.47 :MPS
C1201 0.47 :MPS
R1208 4.7 1/4W :RF
R1209 4.7 1/4W :RF
AUDIO L
AUDIO R
C1203 0.22 :MPS
C1204 0.22 :MPS
C1216 2200p :MPS
C1217 2200p :MPS
R1211 3.9k 1/4W
R1212 3.9k 1/4W
CN201 4P
4 GND
3 L OUT
2 GND
1 R OUT
C1205 0.01 F
C1206 0.01 F
+5V
D302 1SS133T
R415 39 1/2W
R414 39 1/2W
L403 JW 5MM
L404 JW 5MM
C353 220p SL:CHIP
R335 :CHIP
R336 :CHIP
R337 :CHIP
B
G
R
CN081 6P
6 B OUT
5 G OUT
4 R OUT
3 IFB
2 E
1 +5V
TO C BOARD CNC71
R355 1M
R339 3.3k :CHIP
R332 *
R341 6.8k
R322 75 :CHIP
5V
CN402 9P
1 AU IN L
2 GND
3 AU IN R
4 Y IN
5 GND
6 V2 IN
7 HP R
8 GND
9 HP L
TO H1 BOARD CN906
L409 10µH
IC401
NJM2233BL
VIDEO SW
VCC
GND
AV2
SW
AV1
R359 47k
KV-21X1B ONLY
D308 1SS133T
R349 220k
C348 0.01
D307 1SS133T
Q307 2SA933AS-RT
R347 470
R348 10k
R350 220
⑱
CN082 5P
5 H2
4 N/C
3 GND
2 N/C
1 +190V
TO C BOARD CNC72
C349 *
HV TO PICTURE TUBE
FV TO C BOARD
TO C BOARD CNC73
C350 0.1
R356 820k
C358 0.01
R352 470k
R357 *
⑰
CN801 6P
1 H DY
2 H DY
3 H DY
4 H DY
5 V DY -
6 V DY +
C803 0.68 200V
R800 150 2W
L800 3.3mH
C824 0.01 400V :MPS
C800 3.3 250V
R820 3.3k
L806 HLC
L803
⑬
⑫
DY
H.DY
H.DY
V.DY
V.DY

WAVEFORMS A BOARD



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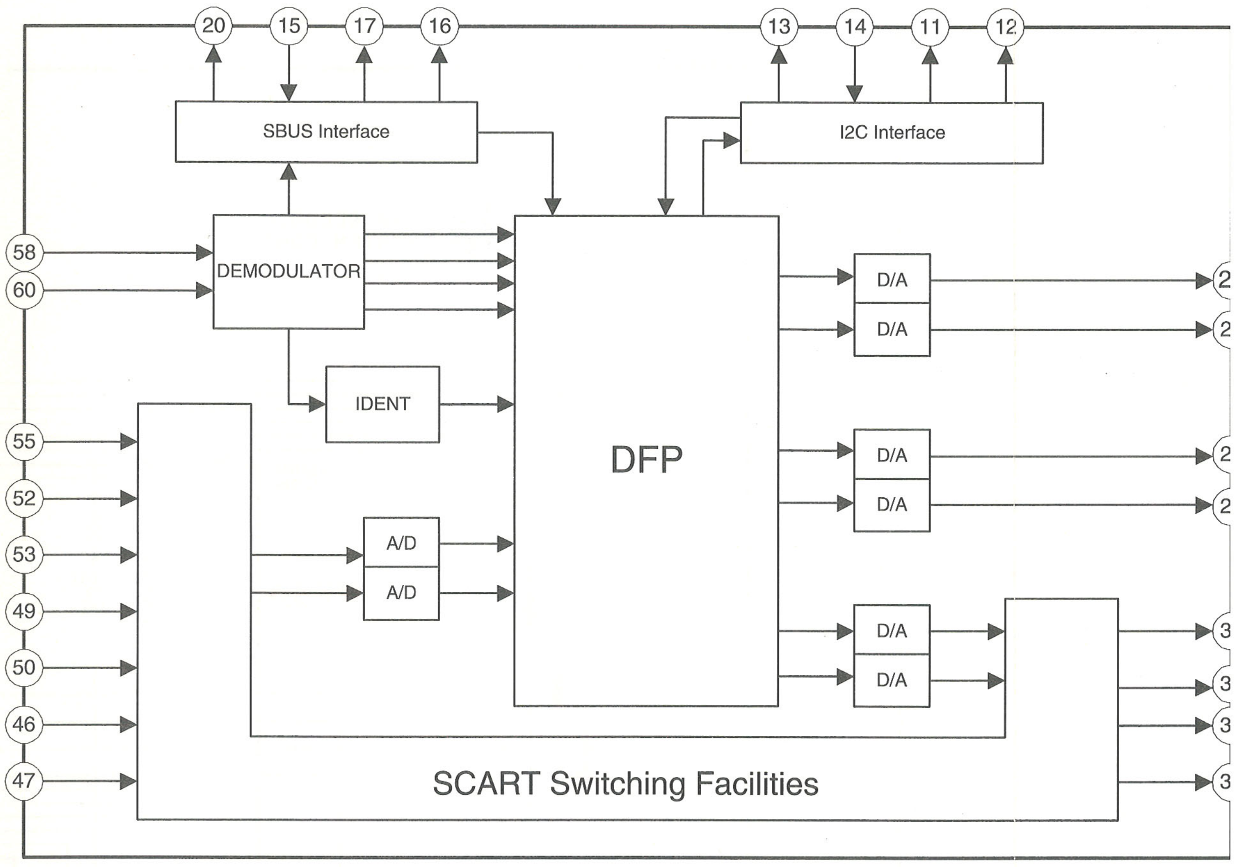
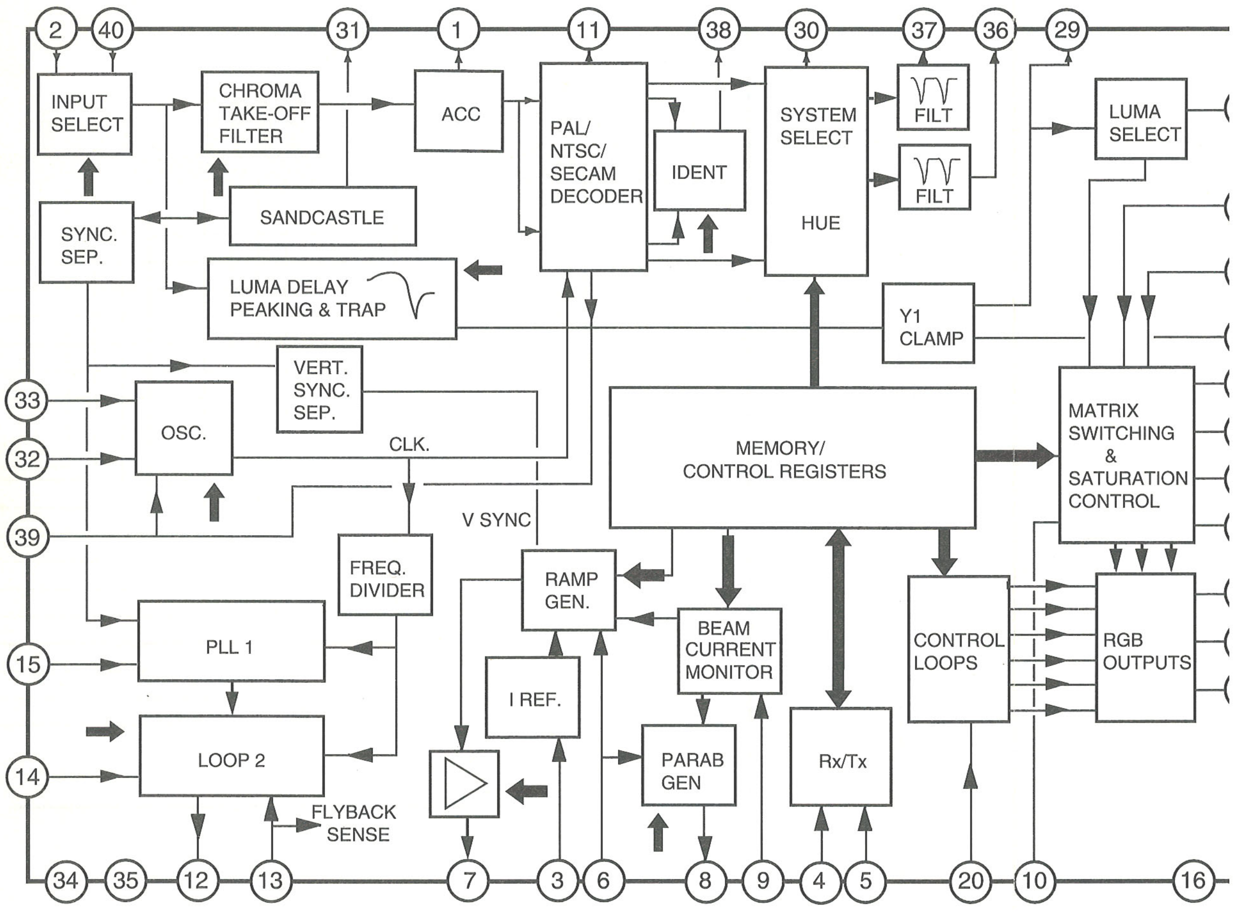

⑳
⑮
⑰
⑯
⑬
⑭
⑪
⑫
SBUS Interface
I2C Interface
58
60
DEMODULATOR
IDENT
DFP
D/A
D/A
D/A
D/A
D/A
D/A
A/D
A/D
55
52
53
49
50
46
47
SCART Switching Facilities

A BOARD IC301 MC44002P


②
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①
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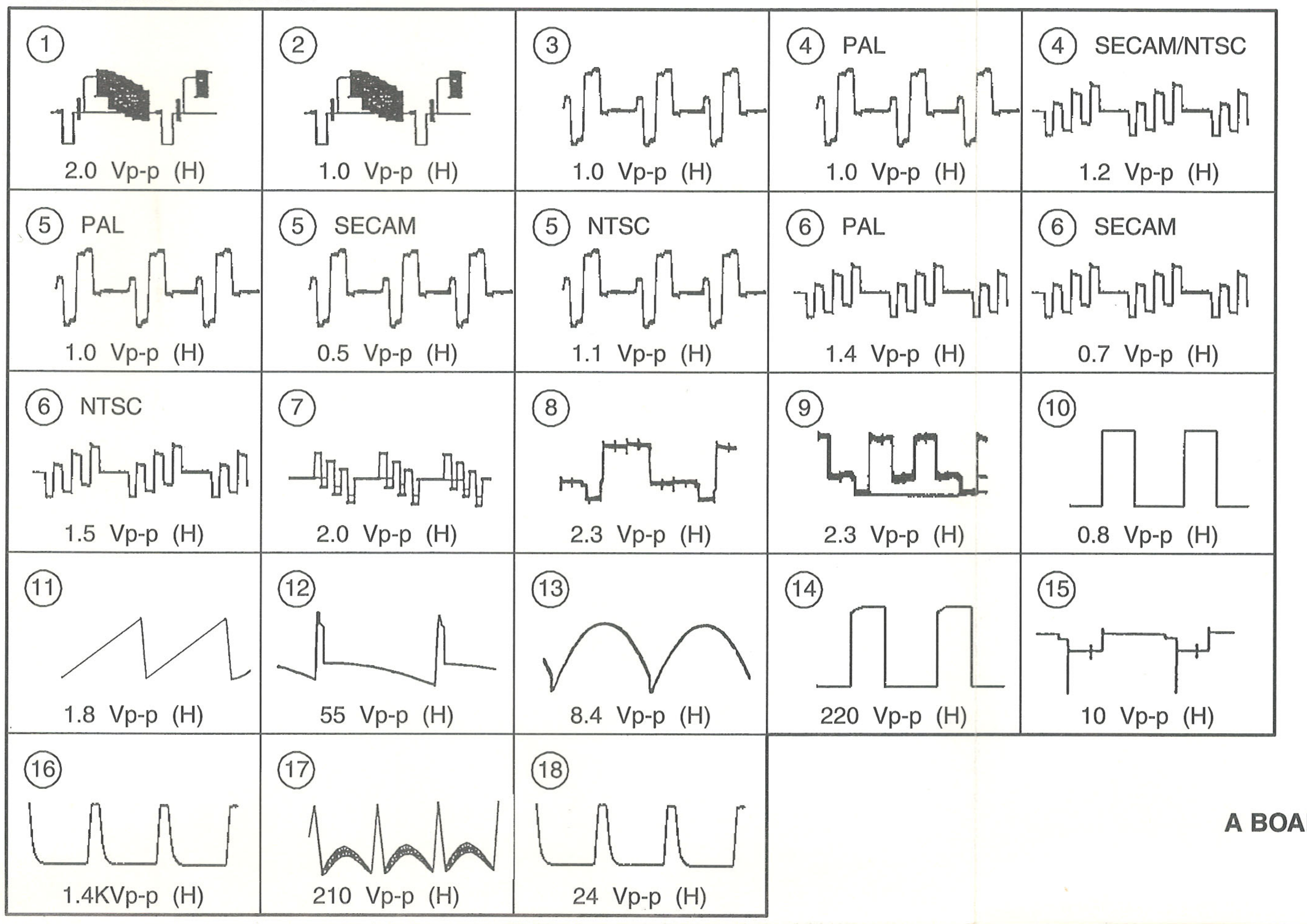
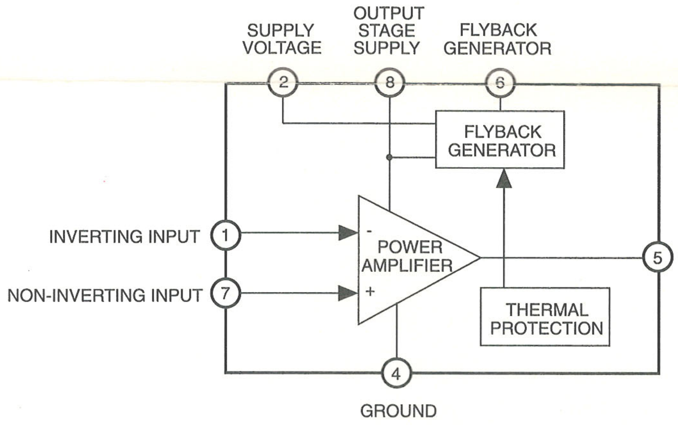
㊱
㉙
INPUT SELECT
CHROMA TAKE-OFF FILTER
ACC
PAL/ NTSC/ SECAM DECODER
IDENT
SYSTEM SELECT
HUE
FILT
FILT
LUMA SELECT
SYNC. SEP.
SANDCASTLE
LUMA DELAY PEAKING & TRAP
Y1 CLAMP
㉝
㉜
㊴
OSC.
VERT. SYNC. SEP.
CLK.
V SYNC
MEMORY/ CONTROL REGISTERS
MATRIX SWITCHING & SATURATION CONTROL
FREQ. DIVIDER
RAMP GEN.
BEAM CURRENT MONITOR
CONTROL LOOPS
RGB OUTPUTS
⑮
PLL 1
I REF.
⑭
LOOP 2
PARAB GEN
Rx/Tx
FLYBACK SENSE
㉞
㉟
⑫
⑬
⑦
③
⑥
⑧
⑨
④
⑤
⑳
⑩
⑯

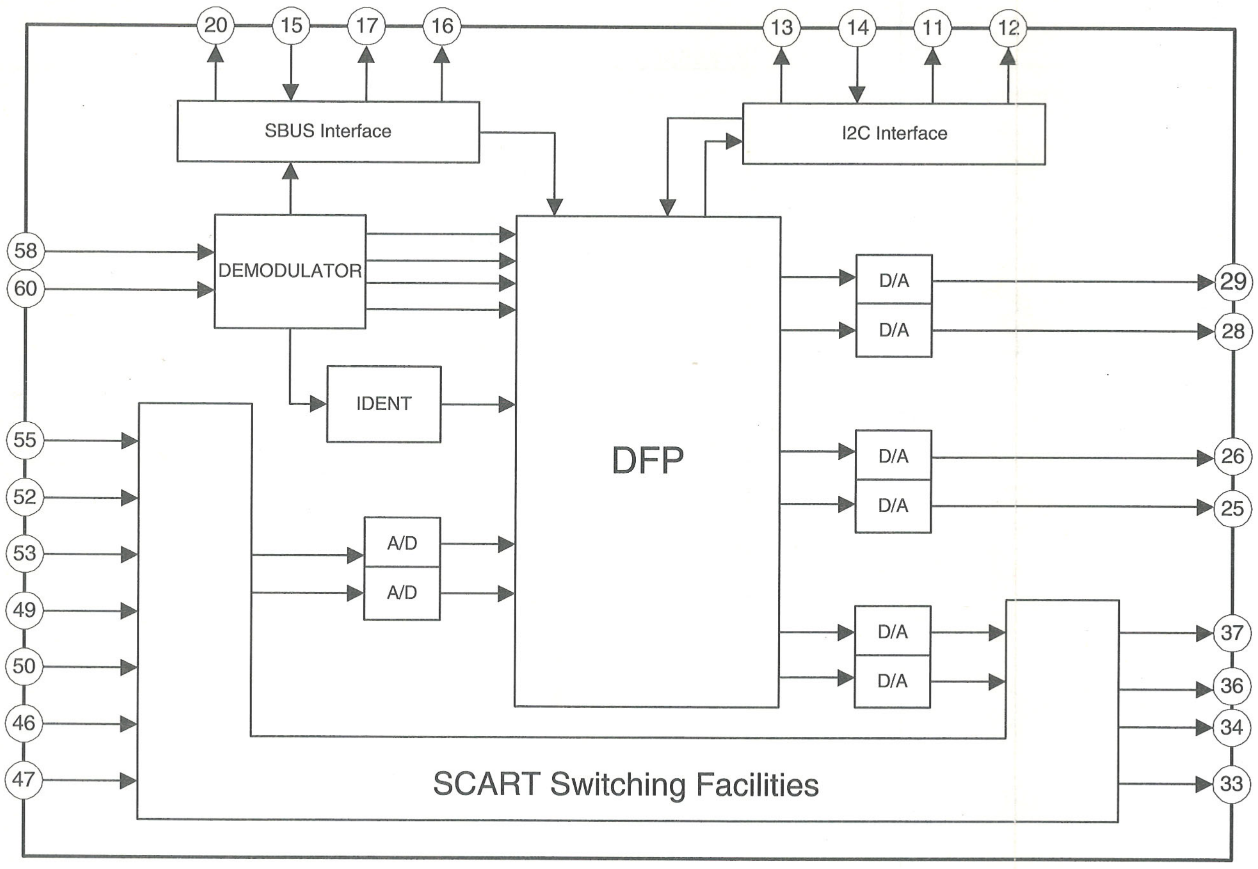
WAVEFORMS A BOARD



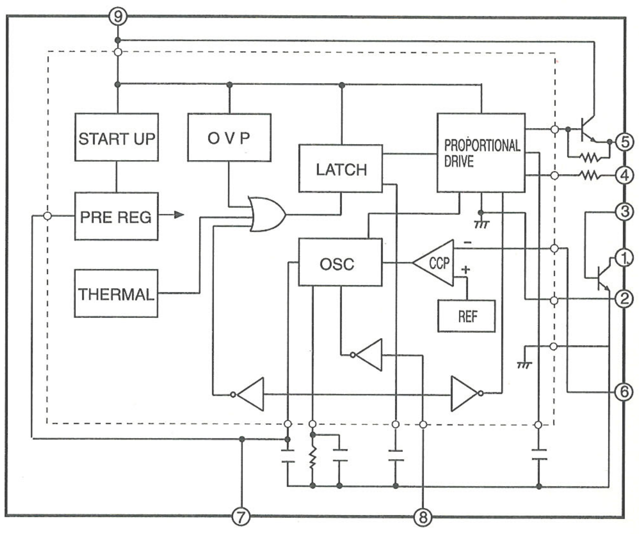
A BOARD IC501 STV9379


SUPPLY VOLTAGE
OUTPUT STAGE SUPPLY
FLYBACK GENERATOR
2
8
6
FLYBACK GENERATOR
INVERTING INPUT
1
NON-INVERTING INPUT
7
POWER AMPLIFIER
-
+
THERMAL PROTECTION
5
OUTPUT
4
GROUND

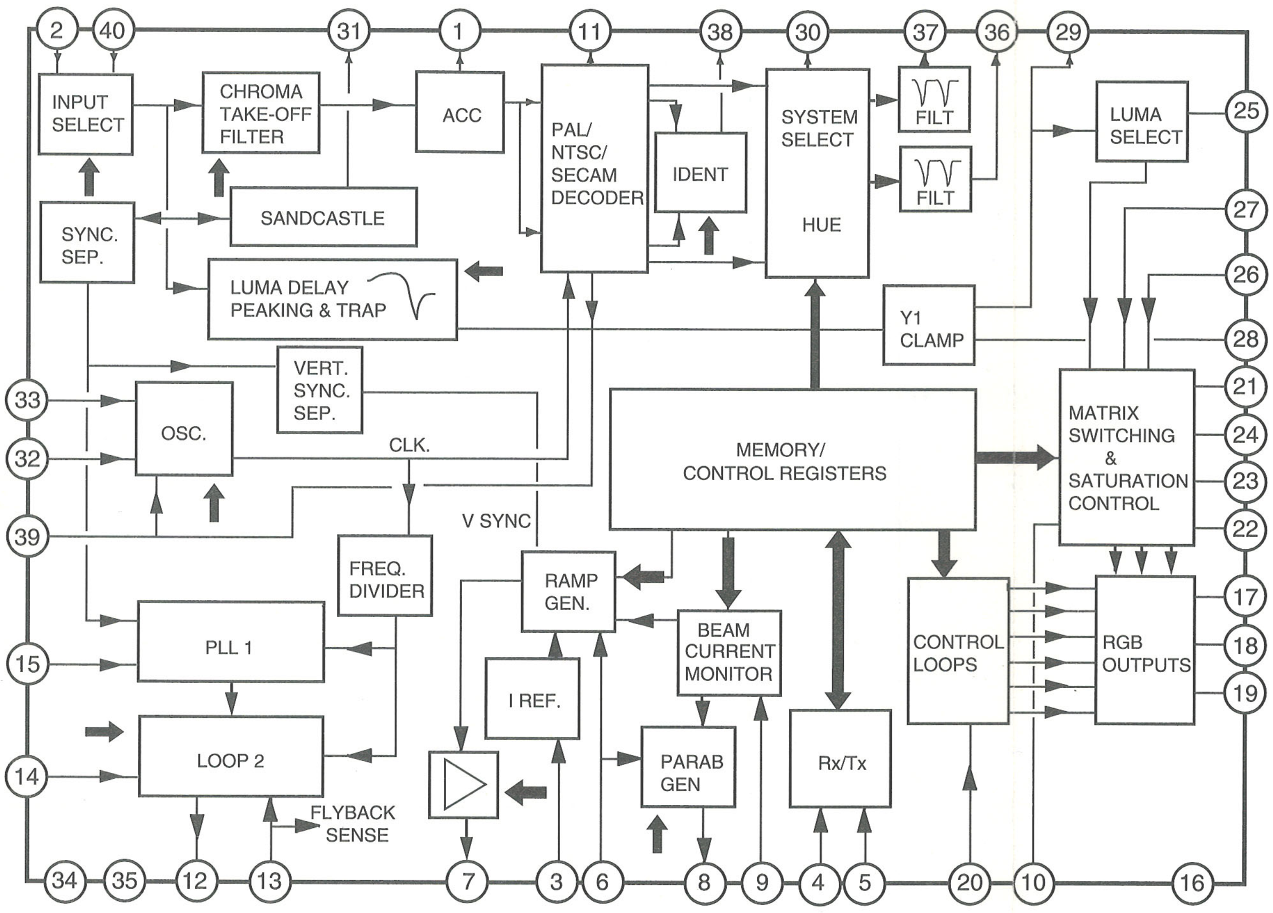
A BOARD IC200 MSP3400C-PP-C6/MSP3410B-PP-F7


20
15
17
16
13
14
11
12
SBUS Interface
I2C Interface
58
60
DEMODULATOR
IDENT
DFP
D/A
D/A
D/A
D/A
D/A
D/A
A/D
A/D
29
28
26
25
37
36
34
33
55
52
53
49
50
46
47
SCART Switching Facilities

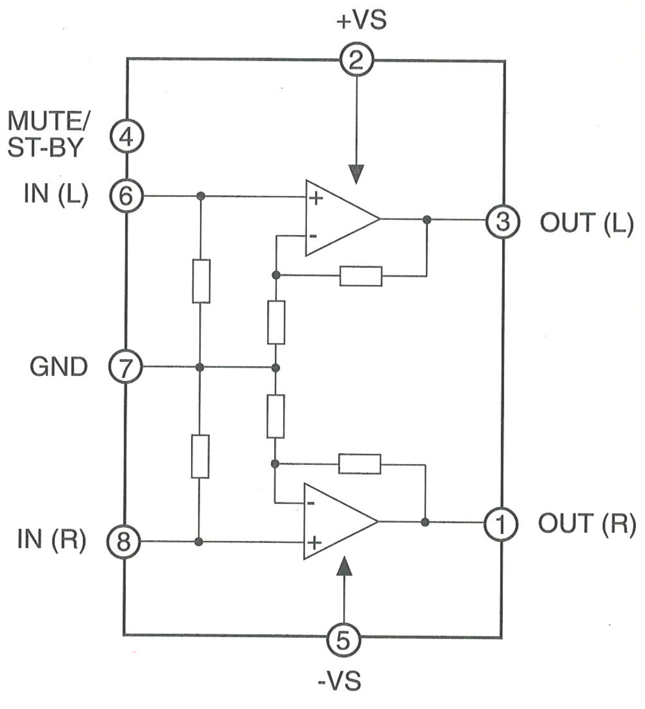
A BOARD IC600 STR-S6707

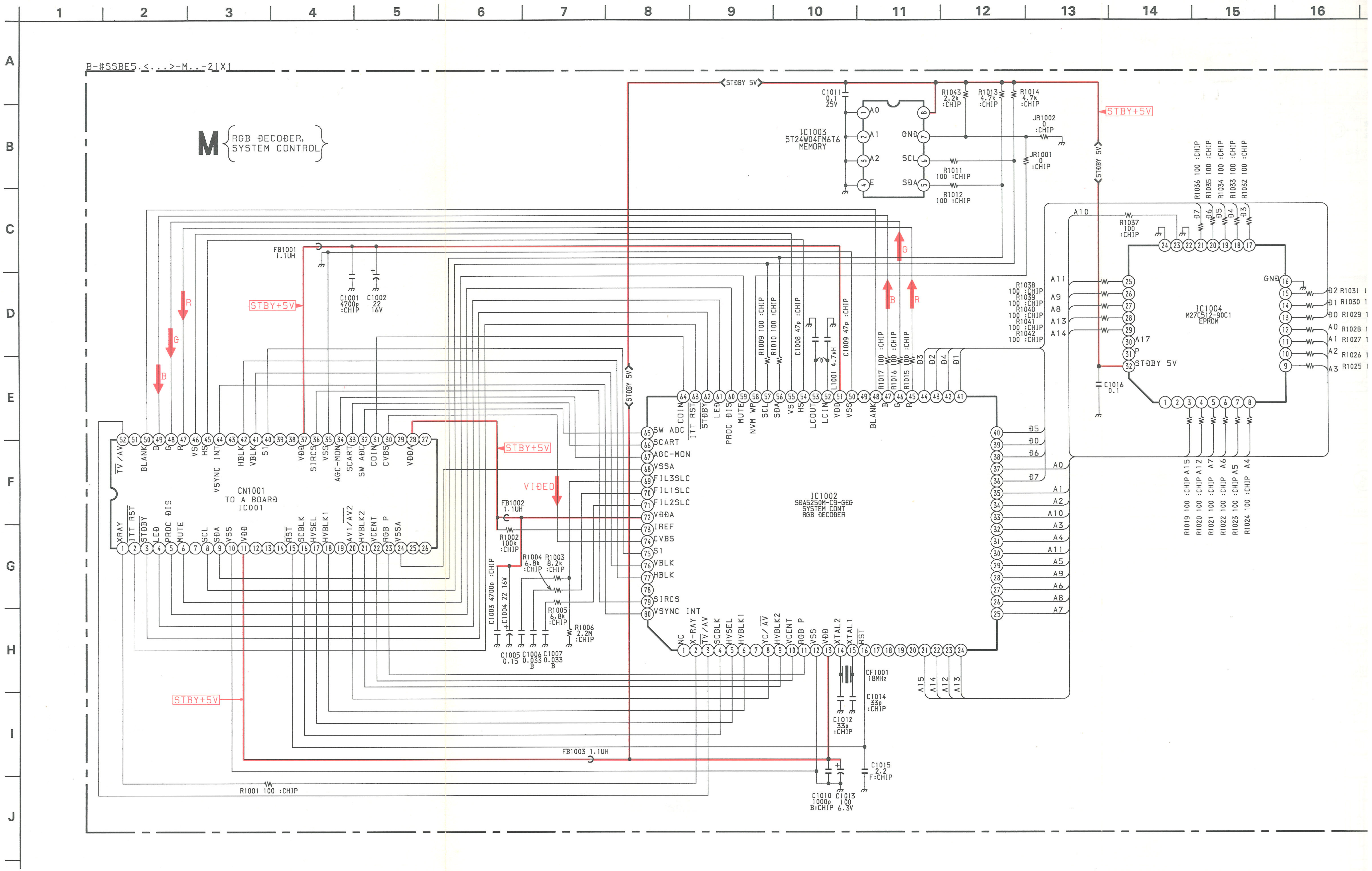

9
START UP
O V P
LATCH
PROPORTIONAL DRIVE
PRE REG
OSC
CCP
-
+
REF
THERMAL
5
4
3
1
2
6
7
8

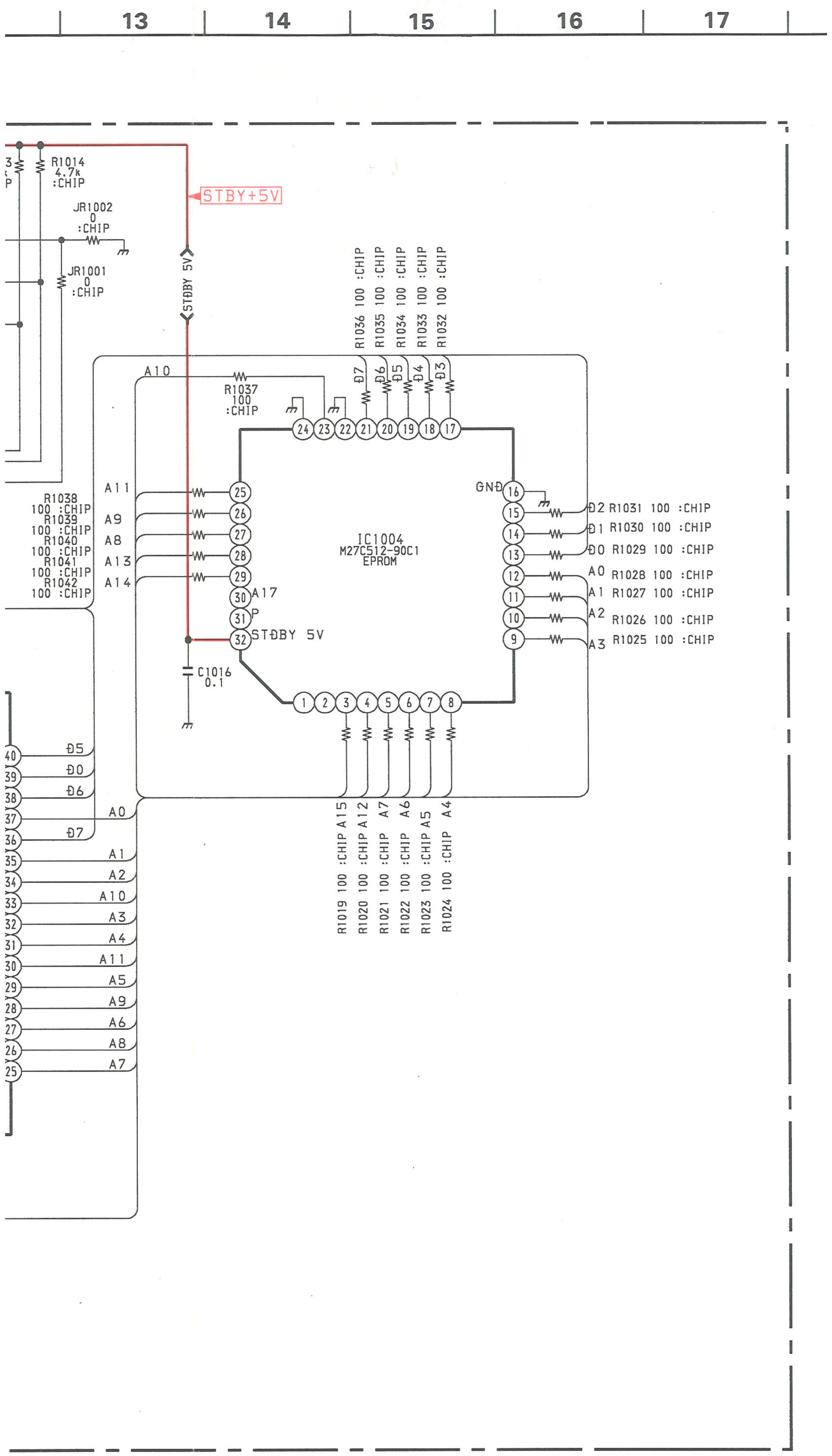
A BOARD IC301 MC44002P


2
40
31
1
11
38
30
37
36
29
INPUT SELECT
CHROMA TAKE-OFF FILTER
ACC
PAL/ NTSC/ SECAM DECODER
IDENT
SYSTEM SELECT
HUE
FILT
FILT
LUMA SELECT
25
SANDCASTLE
SYNC. SEP.
LUMA DELAY PEAKING & TRAP
27
26
Y1 CLAMP
28
VERT. SYNC. SEP.
21
33
OSC.
MEMORY/ CONTROL REGISTERS
MATRIX SWITCHING & SATURATION CONTROL
24
32
CLK.
23
39
V SYNC
22
FREQ. DIVIDER
RAMP GEN.
17
PLL 1
BEAM CURRENT MONITOR
CONTROL LOOPS
RGB OUTPUTS
18
15
I REF.
19
LOOP 2
PARAB GEN
Rx/Tx
14
FLYBACK SENSE
34
35
12
13
7
3
6
8
9
4
5
20
10
16

A BOARD IC1200 TDA7264

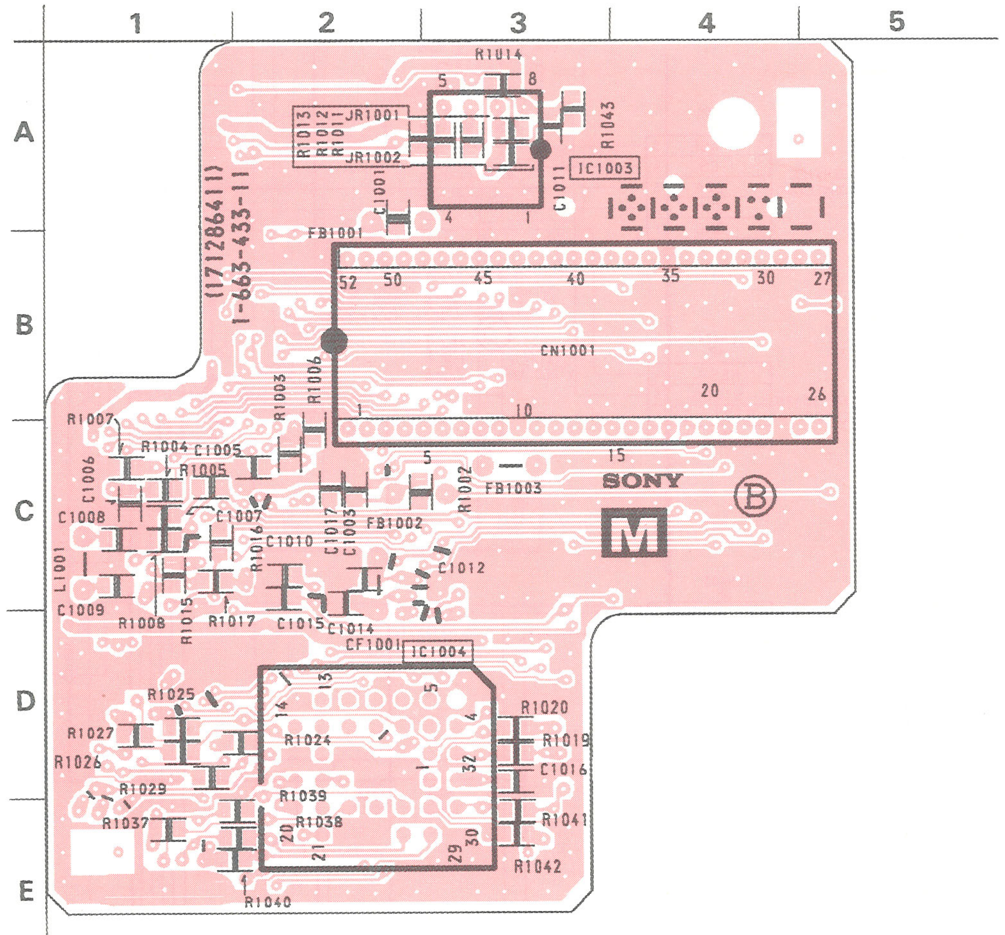

+VS
2
MUTE/ ST-BY
4
IN (L)
6
+
-
3
OUT (L)
GND
7
IN (R)
8
-
+
1
OUT (R)
5
-VS


B-#SSBE5.<...>-M..-21X1
M
RGB DECODER, SYSTEM CONTROL
IC1003 ST24W04FM6T6 MEMORY
IC1002 SDA5250M-C9-GEG SYSTEM CONT RGB DECODER
IC1004 M27C512-90C1 EPROM
CN1001 TO A BOARD IC001
STBY 5V
STBY+5V
VIDEO
FB1001 1.1UH
FB1002 1.1UH
FB1003 1.1UH
C1001 4700p :CHIP
C1002 22 16V
C1003 4700p :CHIP
C1004 22 16V
C1005 0.15
C1006 0.033 B
C1007 0.033 B
C1008 47p :CHIP
C1009 47p :CHIP
C1010 1000p B:CHIP
C1011 0.1 25V
C1012 33p :CHIP
C1013 100 6.3V
C1014 33p :CHIP
C1015 2.2 F:CHIP
C1016 0.1
CF1001 18MHz
L1001 4.7µH
R1001 100 :CHIP
R1002 100k :CHIP
R1003 8.2k :CHIP
R1004 6.8k :CHIP
R1005 6.8k :CHIP
R1006 2.2M :CHIP
R1009 100 :CHIP
R1010 100 :CHIP
R1011 100 :CHIP
R1012 100 :CHIP
R1013 4.7k :CHIP
R1014 4.7k :CHIP
R1015 100 :CHIP
R1016 100 :CHIP
R1017 100 :CHIP
R1019 100 :CHIP A15
R1020 100 :CHIP A12
R1021 100 :CHIP A7
R1022 100 :CHIP A6
R1023 100 :CHIP A5
R1024 100 :CHIP A4
R1025
R1026
R1027
R1028
R1029
R1030
R1031
R1032 100 :CHIP
R1033 100 :CHIP
R1034 100 :CHIP
R1035 100 :CHIP
R1036 100 :CHIP
R1037 100 :CHIP
R1038 100 :CHIP
R1039 100 :CHIP
R1040 100 :CHIP
R1041 100 :CHIP
R1042 100 :CHIP
R1043 2.2k :CHIP
JR1001 0 :CHIP
JR1002 0 :CHIP
A0 A1 A2 E GND SCL SDA
TV/AV BLANK B G R VS HS VSYNC INT HBLK VBLK S1 VDD SIRCS VSS AGC-MON SCART SW ADC COIN CVBS VDDA
XRAY ITT RST STDBY LED PROC DIS MUTE SCL SDA VSS VDD RST SCBLK HVSEL HVBLK1 AV1/AV2 HVBLK2 VCENT RGB P VSSA
COIN ITT RST STDBY LED PROC DIS MUTE NVM WP SCL SDA VS HS LCOUT LCIN VDD VSS BLANK B G R D3 D2 D4 D1
SW ADC SCART AGC-MON VSSA FIL3SLC FIL1SLC FIL2SLC VDDA IREF CVBS S1 VBLK HBLK SIRCS VSYNC INT
NC X-RAY TV/AV SCBLK HVSEL HVBLK1 YC/AV HVBLK2 VCENT RGB P VSS VDD XTAL2 XTAL1 RST
D5 D0 D6 D7 A0 A1 A2 A10 A3 A4 A11 A5 A9 A6 A8 A7
A15 A14 A12 A13
A10 A11 A9 A8 A13 A14 A17 P STBY 5V GND
D7 D6 D5 D4 D3 D2 D1 D0 A0 A1 A2 A3
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J

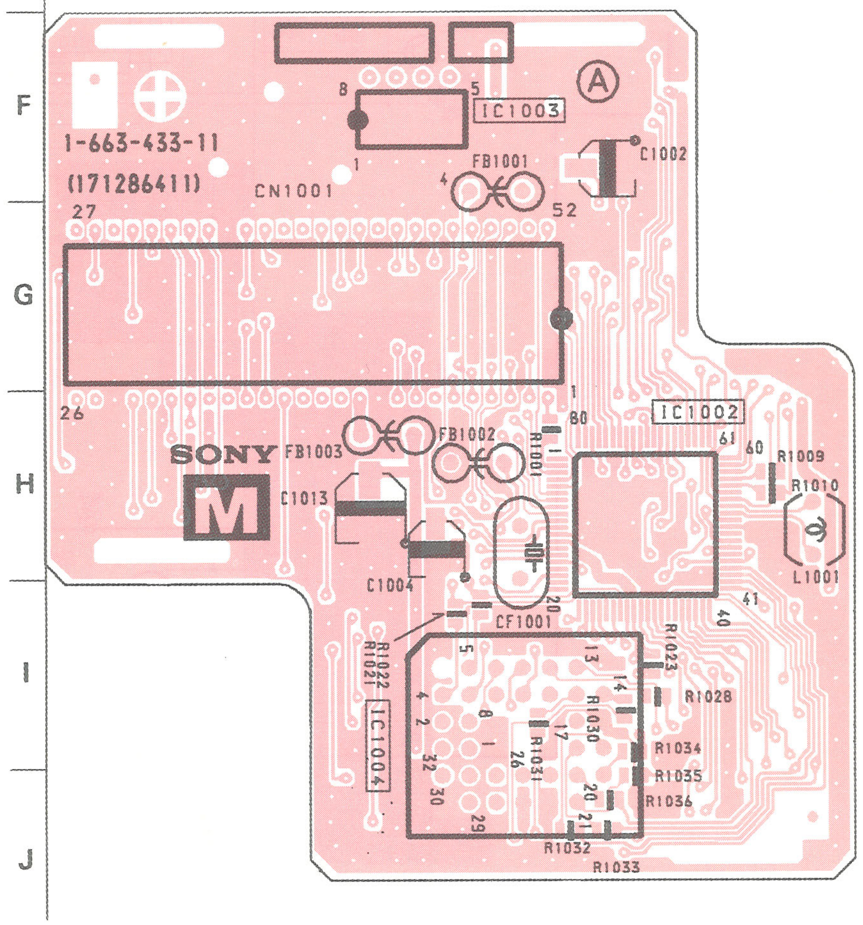

13
14
15
16
17
R1014 4.7k :CHIP
STBY+5V
JR1002 0 :CHIP
JR1001 0 :CHIP
STBY 5V
R1036 100 :CHIP
R1035 100 :CHIP
R1034 100 :CHIP
R1033 100 :CHIP
R1032 100 :CHIP
R1037 100 :CHIP
A10
D7
D6
D5
D4
D3
GND
IC1004
M27C512-90C1
EPROM
A17
P
STBY 5V
C1016 0.1
R1038 100 :CHIP
R1039 100 :CHIP
R1040 100 :CHIP
R1041 100 :CHIP
R1042 100 :CHIP
A11
A9
A8
A13
A14
D2 R1031 100 :CHIP
D1 R1030 100 :CHIP
D0 R1029 100 :CHIP
A0 R1028 100 :CHIP
A1 R1027 100 :CHIP
A2 R1026 100 :CHIP
A3 R1025 100 :CHIP
R1019 100 :CHIP A15
R1020 100 :CHIP A12
R1021 100 :CHIP A7
R1022 100 :CHIP A6
R1023 100 :CHIP A5
R1024 100 :CHIP A4
D5
D0
D6
D7
A0
A1
A2
A10
A3
A4
A11
A5
A9
A6
A8
A7

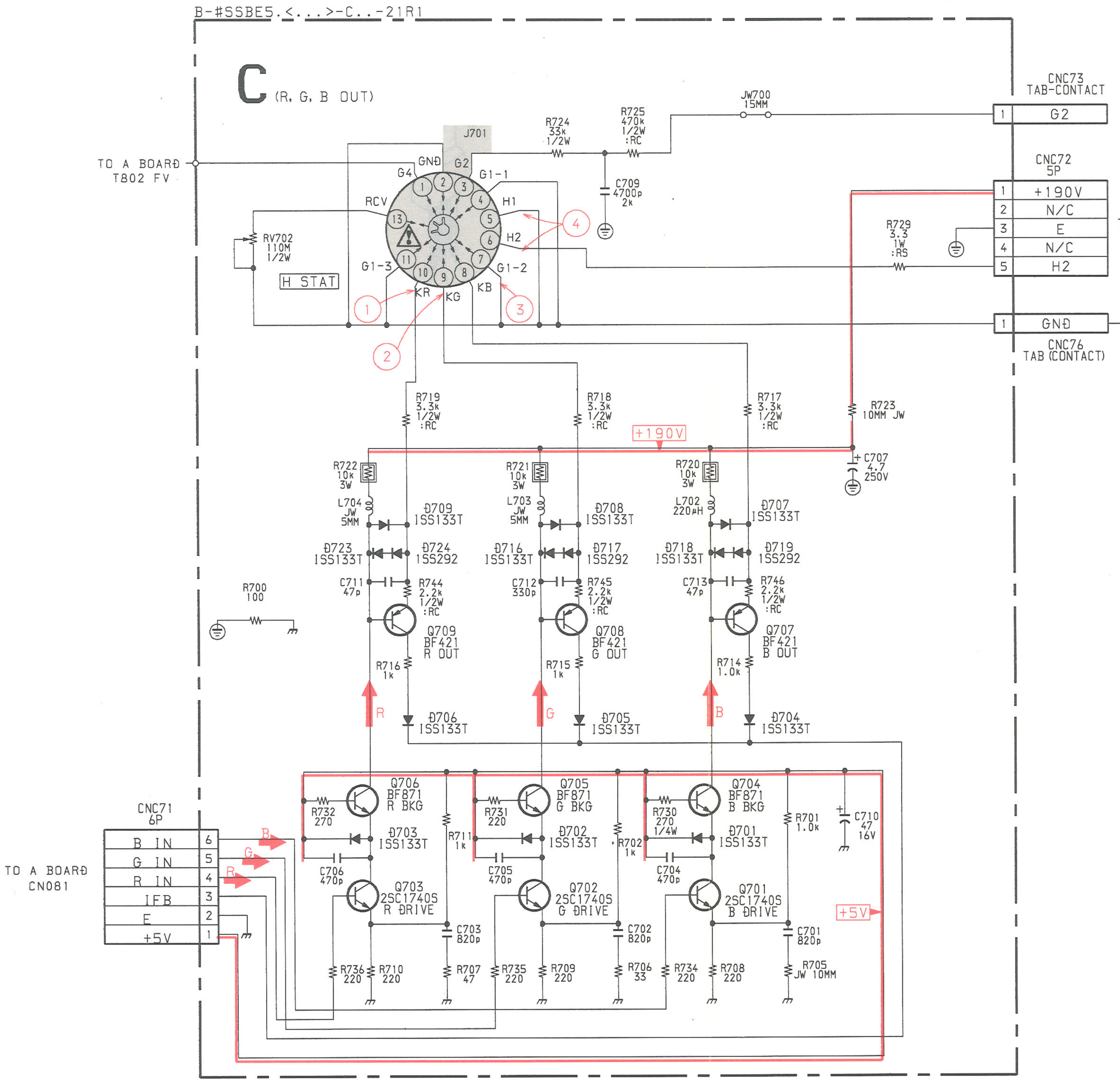
M [RGB DECODER, SYSTEM CONTROL]

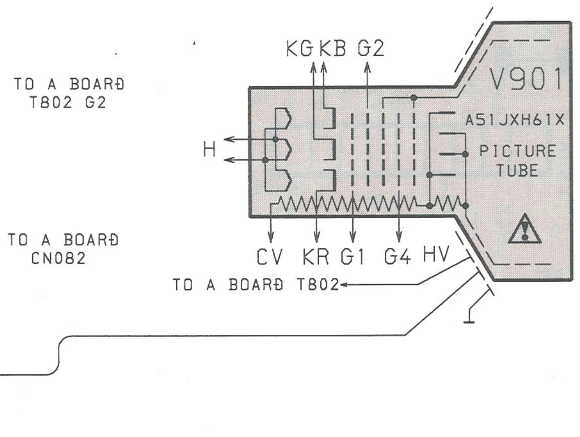
M Board < Conductor Side >


1
2
3
4
5
A
B
C
D
E
(171286411)
1-663-433-11
IC1003
CN1001
SONY
M
B
IC1004
CF1001
FB1001
FB1002
FB1003
JR1001
JR1002
R1007
R1025
R1027
R1026
R1029
R1037
R1040
R1020
R1019
R1041
R1042

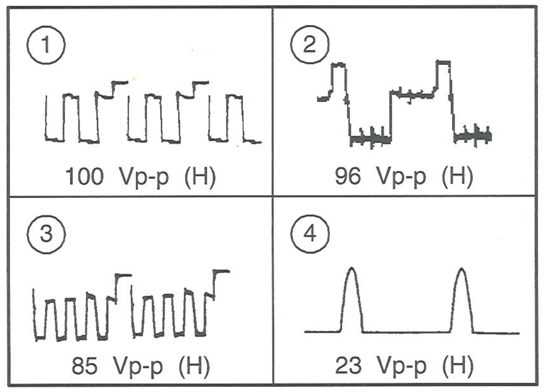
M Board < Component Side >

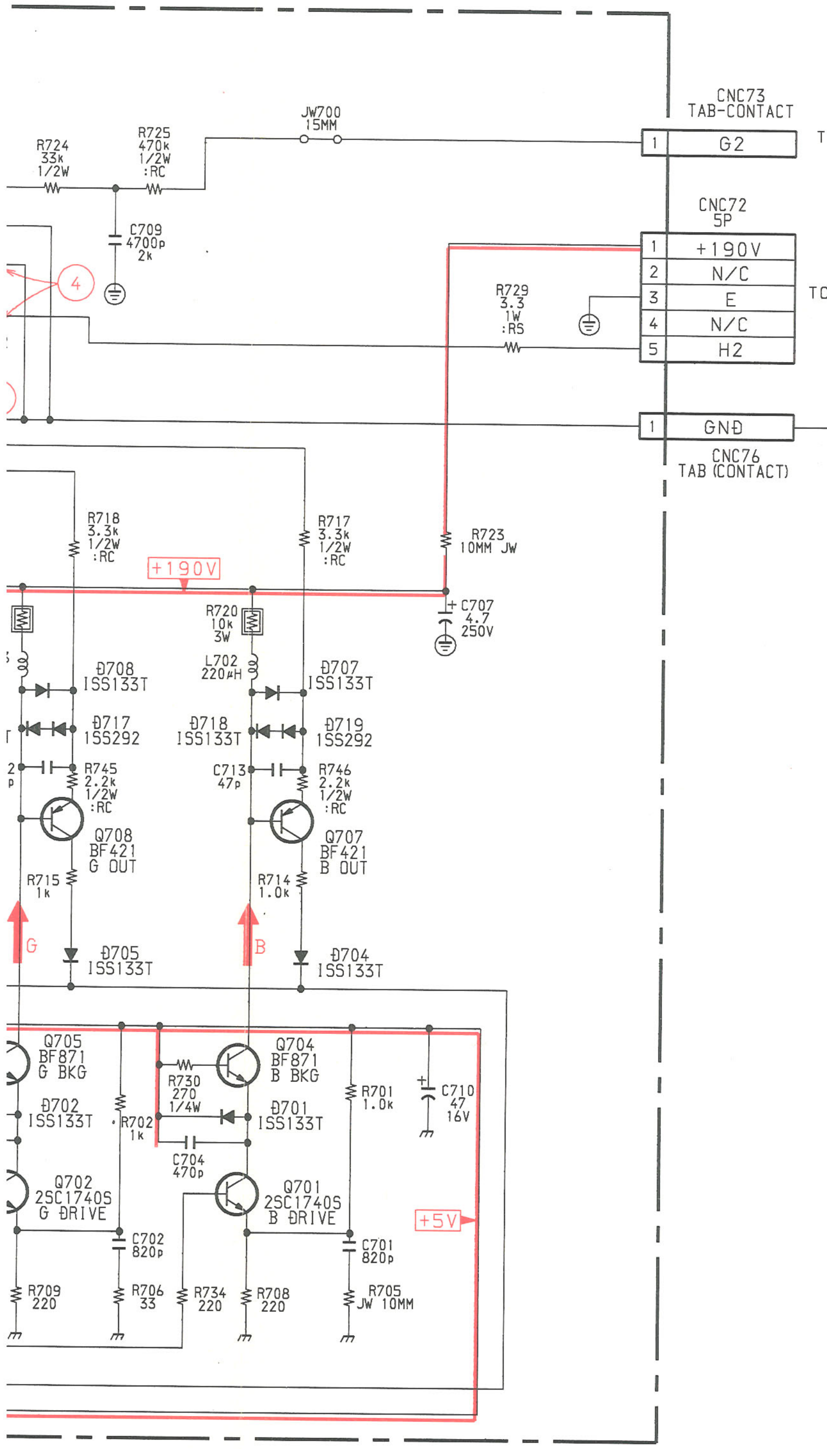
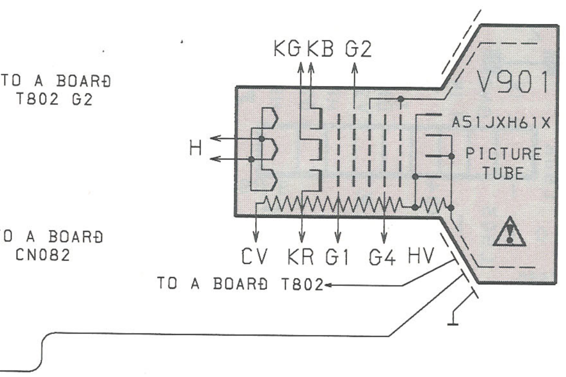

F
G
H
I
J
A
1-663-433-11
(171286411)
CN1001
IC1003
FB1001
C1002
SONY
M
FB1003
FB1002
C1013
C1004
CF1001
IC1002
R1009
R1010
L1001
IC1004
R1028
R1034
R1035
R1036
R1032
R1033


B-#SSBE5.<...>-C..-21R1
C (R, G, B OUT)
TO A BOARD T802 FV
RV702 110M 1/2W
H STAT
J701
GND G2 G4 G1-1 RCV H1 H2 G1-3 G1-2 KR KG KB
R724 33k 1/2W
R725 470k 1/2W :RC
JW700 15MM
C709 4700p 2k
CNC73 TAB-CONTACT
1 G2
CNC72 5P
1 +190V
2 N/C
3 E
4 N/C
5 H2
R729 3.3 1W :RS
1 GND
CNC76 TAB (CONTACT)
R723 10MM JW
C707 4.7 250V
+190V
R719 3.3k 1/2W :RC
R718 3.3k 1/2W :RC
R717 3.3k 1/2W :RC
R722 10k 3W
R721 10k 3W
R720 10k 3W
L704 JW 5MM
L703 JW 5MM
L702 220µH
D709 1SS133T
D708 1SS133T
D707 1SS133T
D723 1SS133T
D724 1SS292
D716 1SS133T
D717 1SS292
D718 1SS133T
D719 1SS292
C711 47p
R744 2.2k 1/2W :RC
C712 330p
R745 2.2k 1/2W :RC
C713 47p
R746 2.2k 1/2W :RC
R700 100
Q709 BF421 R OUT
Q708 BF421 G OUT
Q707 BF421 B OUT
R716 1k
R715 1k
R714 1.0k
R G B
D706 1SS133T
D705 1SS133T
D704 1SS133T
CNC71 6P
B IN 6
G IN 5
R IN 4
IFB 3
E 2
+5V 1
TO A BOARD CN081
Q706 BF871 R BKG
Q705 BF871 G BKG
Q704 BF871 B BKG
R732 270
R731 220
R730 270 1/4W
D703 1SS133T
D702 1SS133T
D701 1SS133T
R711 1k
R702 1k
R701 1.0k
C710 47 16V
C706 470p
C705 470p
C704 470p
Q703 2SC1740S R DRIVE
Q702 2SC1740S G DRIVE
Q701 2SC1740S B DRIVE
+5V
C703 820p
C702 820p
C701 820p
R736 220
R710 220
R707 47
R735 220
R709 220
R706 33
R734 220
R708 220
R705 JW 10MM
① ② ③ ④

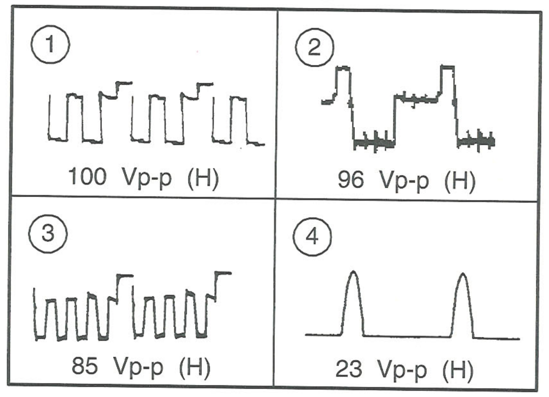

TO A BOARD T802 G2
TO A BOARD CN082
KG KB G2
V901
A51JXH61X
PICTURE TUBE
H
CV KR G1 G4 HV
TO A BOARD T802

WAVEFORMS C BOARD



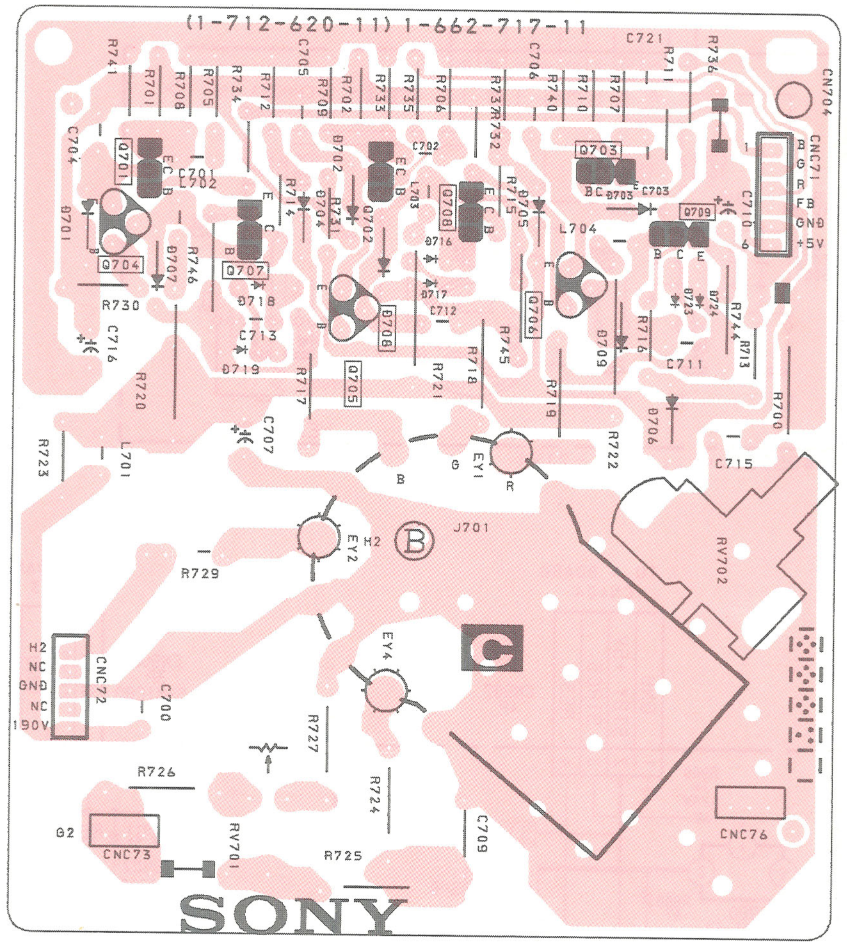


CNC73
TAB-CONTACT
1 G2
TO A BOARD T802 G2
JW700 15MM
R724 33k 1/2W
R725 470k 1/2W :RC
C709 4700p 2k
CNC72 5P
1 +190V
2 N/C
3 E
4 N/C
5 H2
TO A BOARD CN082
R729 3.3 1W :RS
1 GND
CNC76 TAB (CONTACT)
KG KB G2
V901
A51JXH61X PICTURE TUBE
H
CV KR G1 G4 HV
TO A BOARD T802
R718 3.3k 1/2W :RC
R717 3.3k 1/2W :RC
+190V
R723 10MM JW
R720 10k 3W
C707 4.7 250V
L702 220μH
D708 1SS133T
D707 1SS133T
D717 1SS292
D718 1SS133T
D719 1SS292
R745 2.2k 1/2W :RC
C713 47p
R746 2.2k 1/2W :RC
Q708 BF421 G OUT
Q707 BF421 B OUT
R715 1k
R714 1.0k
G
B
D705 1SS133T
D704 1SS133T
Q705 BF871 G BKG
Q704 BF871 B BKG
R730 270 1/4W
R701 1.0k
C710 47 16V
D702 1SS133T
R702 1k
D701 1SS133T
C704 470p
Q702 2SC1740S G DRIVE
Q701 2SC1740S B DRIVE
+5V
C702 820p
C701 820p
R709 220
R706 33
R734 220
R708 220
R705 JW 10MM

WAVEFORMS C BOARD



C [R,G,B OUT]

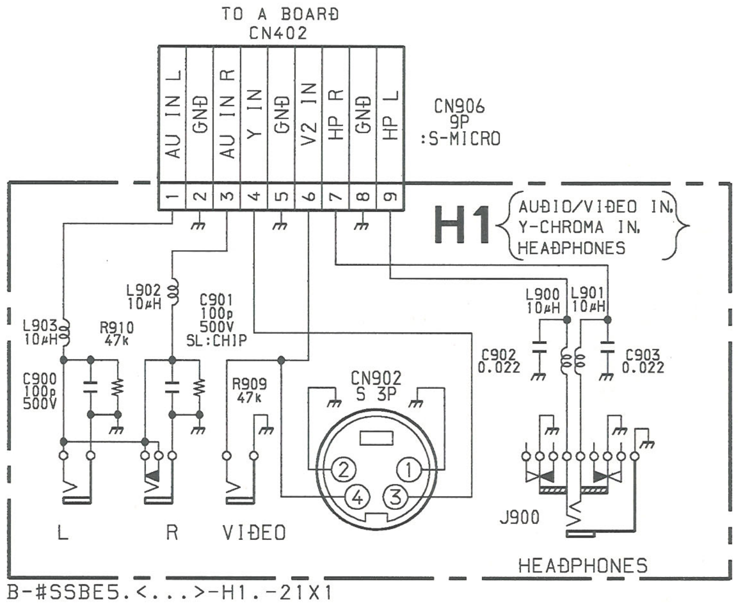
C Board

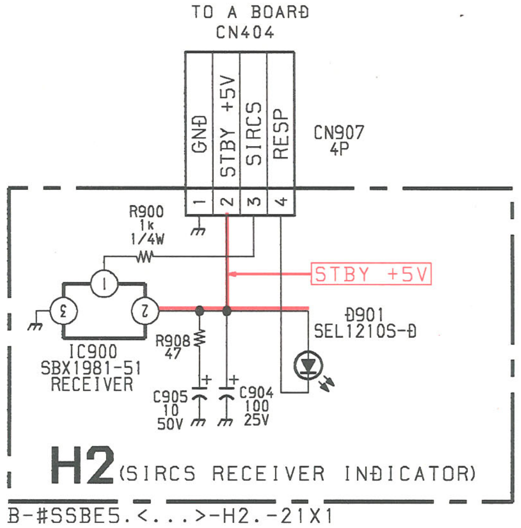

(1-712-620-11) 1-662-717-11
CN704
CNC71
R
G
B
FB
GND
+5V
Q701
Q702
Q703
Q704
Q705
Q706
Q707
Q708
Q709
L704
R730
R720
L701
R723
J701
EY1
EY2
EY4
H2
B
R729
H2
NC
GND
NC
190V
CNC72
C700
R726
R727
R724
C709
R725
RV701
G2
CNC73
CNC76
RV702
C715
R700
C
SONY

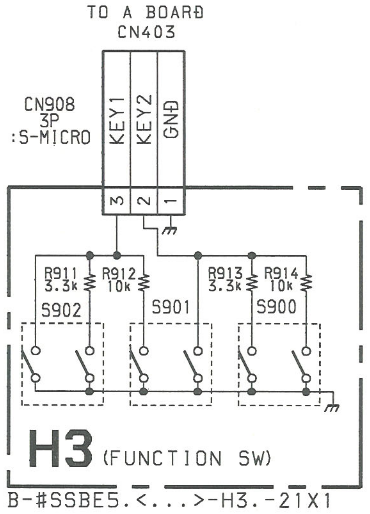
C BOARD
TRANSISTOR VOLTAGE TABLE

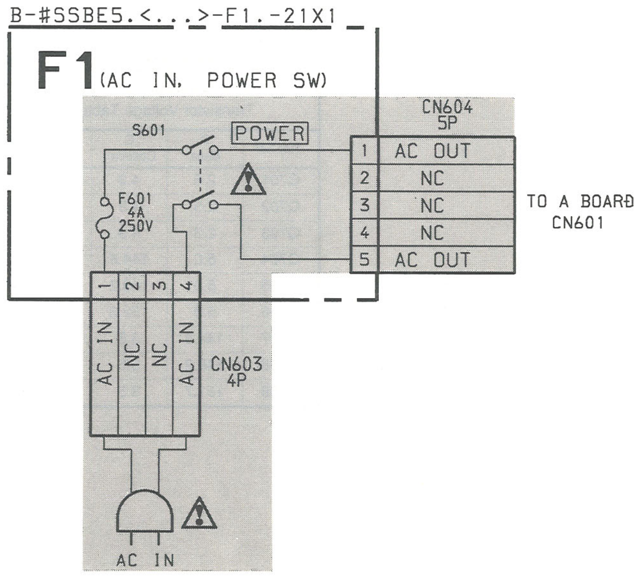
Transistor Voltage Table

Ref No	B Base	C Collector	E Emitter
Q701	2.5	4.3	1.8
Q702	2.5	4.3	1.8
Q703	2.3	4.3	1.7
Q704	5.0	144.8	4.3
Q705	5.0	149.2	4.3
Q706	5.0	152.3	4.3
Q707	144.8	3.5	152.3
Q708	149.2	3.5	149.2
Q709	151.7	3.5	172.1


TO A BOARD
CN402
AU IN L
GND
AU IN R
Y IN
GND
V2 IN
HP R
GND
HP L
CN906
9P
:S-MICRO
H1
AUDIO/VIDEO IN,
Y-CHROMA IN,
HEADPHONES
L902
10µH
C901
100p
500V
SL:CHIP
L903
10µH
R910
47k
C900
100p
500V
R909
47k
CN902
S 3P
L900
10µH
L901
10µH
C902
0.022
C903
0.022
J900
L
R
VIDEO
HEADPHONES
B-#SSBE5.<...>-H1.-21X1

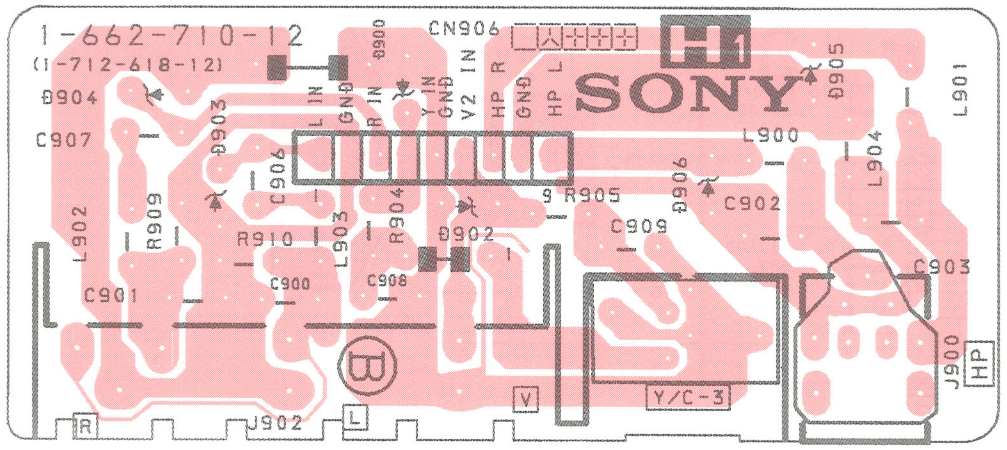

TO A BOARD
CN404
GND
STBY +5V
SIRCS
RESP
CN907
4P
R900
1k
1/4W
STBY +5V
D901
SEL1210S-D
R908
47
IC900
SBX1981-51
RECEIVER
C905
10
50V
C904
100
25V
H2
(SIRCS RECEIVER INDICATOR)
B-#SSBE5.<...>-H2.-21X1


TO A BOARD
CN403
CN908
3P
:S-MICRO
KEY1
KEY2
GND
R911
3.3k
R912
10k
R913
3.3k
R914
10k
S902
S901
S900
H3
(FUNCTION SW)
B-#SSBE5.<...>-H3.-21X1

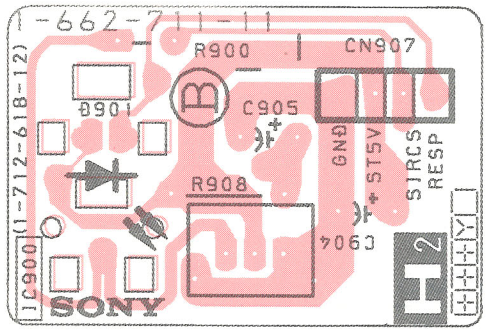

B-#SSBE5.<...>-F1.-21X1
F1
(AC IN, POWER SW)
CN604
5P
S601
POWER
F601
4A
250V
AC OUT
NC
NC
NC
AC OUT
TO A BOARD
CN601
AC IN
NC
NC
AC IN
CN603
4P
AC IN

H1 [AUDIO/VIDEO IN, Y-CHROMA IN, HEADPHONES] **H2** [SIRCS RECEIVER, INDICATOR] **H3** [FUNCTION SW] **F1** [AC IN, POWER SW]

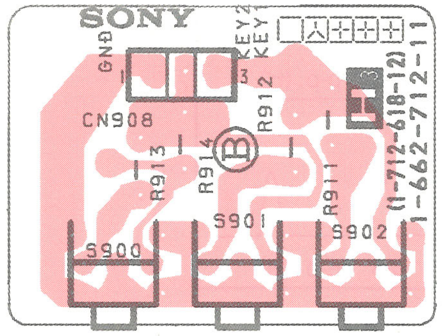
H1 Board


1-662-710-12
(1-712-618-12)
CN906
SONY
D904
C907
D903
L902
R909
C901
C906
R910
L903
C900
C908
R904
D902
R905
C909
D906
C902
L900
L904
D905
L901
C903
J900
HP
Y/C-3
V
L
R
J902

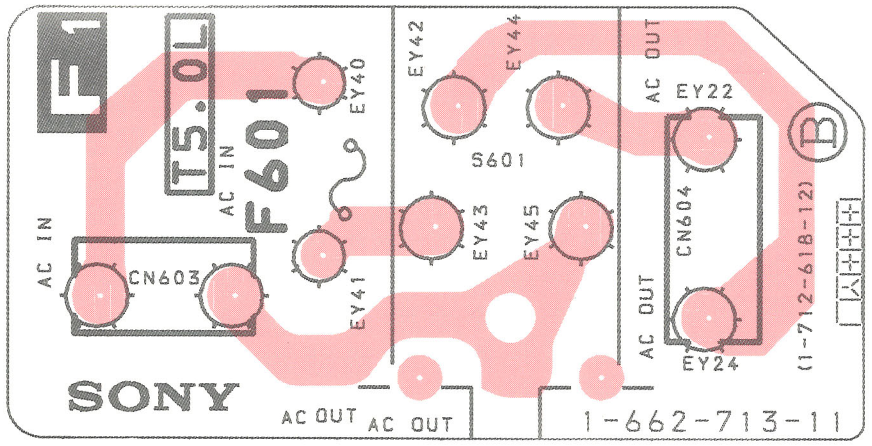
H2 Board


1-662-711-11
(1-712-618-12)
R900
CN907
D901
C905
GND
+5TSV
SIRCS
RESP
R908
C904
IC900
SONY
H2

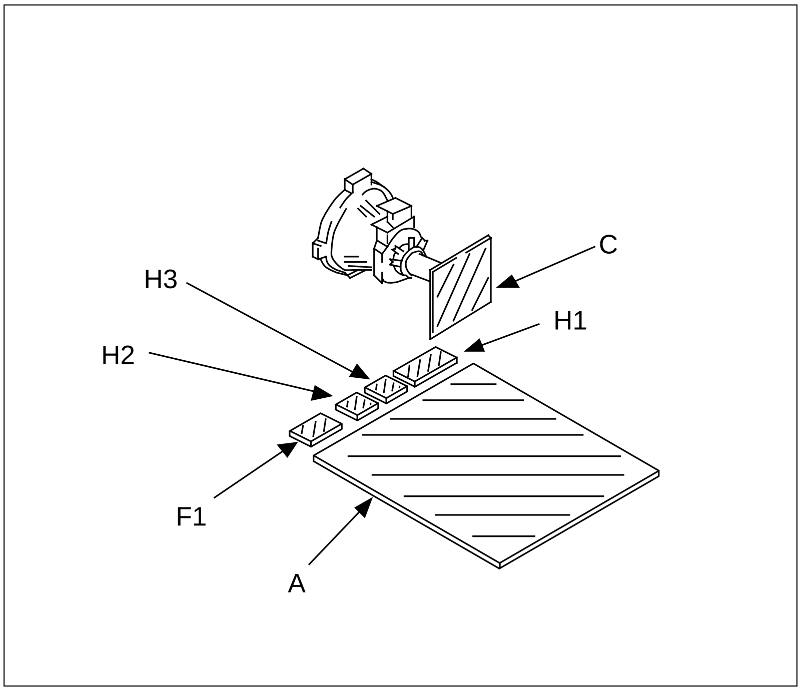
H3 Board


SONY
GND
KEY2
KEY
CN908
R912
R913
R914
R911
S901
S900
S902
(1-712-618-12)
1-662-712-11
H3

F1 Board


F1
T5.0L
F601
AC IN
EY40
EY42
EY44
AC OUT
EY22
S601
EY43
EY45
CN604
CN603
EY41
AC OUT
EY24
(1-712-618-12)
SONY
AC OUT
AC OUT
1-662-713-11

5-2. CIRCUIT BOARDS LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power 1/4 W

- —▭— : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⏚ : earth - chassis.
- ╪ : no mounted.

Note : The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

Note : Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

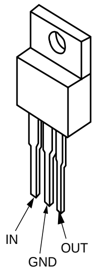
Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: ※	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

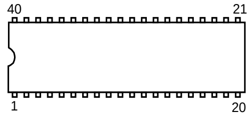
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- ▬ : B+ bus.
- ➡ : signal path. (RF)

5-4. SEMICONDUCTORS

L4941BV
LM78080CT
MC7808CT
TEA7605
TL750L05CLPR

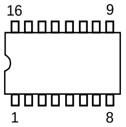


MC44002P



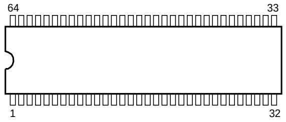
(TOP VIEW)

MC44140P



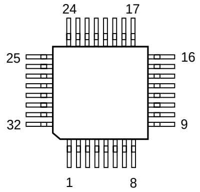
(TOP VIEW)

MSP3400C-PP-C6
MSP3410B-PP-F7



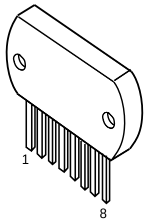
(TOP VIEW)

M27C512-90C1-BE5-1

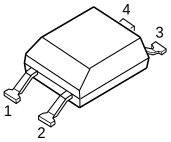

24
17
25
16
32
9
1
8

(TOP VIEW)

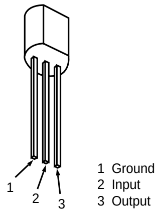
NJM2233BL



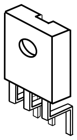
PC123F2
PC123FY2



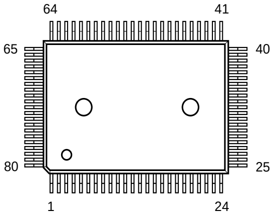
PST572D
PST572D-T


1
2
3
1 Ground
2 Input
3 Output

SBX1981-51

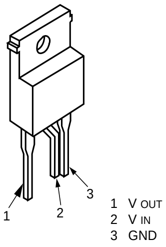


SDA5250M-C9-GEG

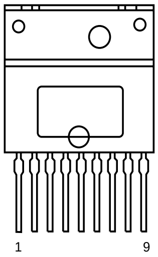

64
41
65
40
80
25
1
24

(MARKING SIDE VIEW)

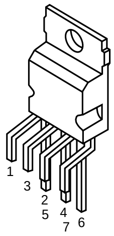
SE-135N
SE135N-LF12


1
2
3
1 V OUT
2 V IN
3 GND

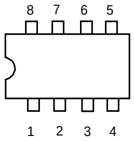
STR-S6707



STV9379

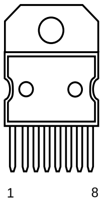


TDA2822M
TEA2124

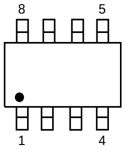


(TOP VIEW)

TDA7264

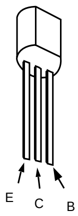


ST24W04FB6

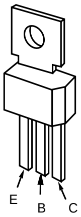


(TOP VIEW)

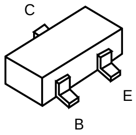
BF421-AMMO
2SA1091-O



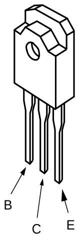
BF871-127



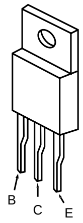
DTA144ESA
DTA144ESA-TP
DTC114EK
DTC114EKA-T146
DTC143TKA-T146
DTC144EKA-T146
2SA1037K-T-146-R
2SA1162-G
2SC2412K-QR
2SC2412K-T-146-R



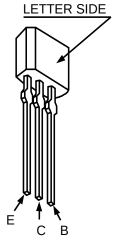
S2000N-16E305A



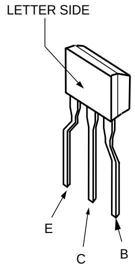
2SA1667
2SC3852A
2SD2394-EF



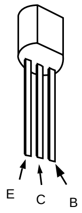
2SA933AS-QRT
2SA933AS-RT
2SC1740S-RT


LETTER SIDE
E
C
B

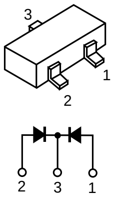
2SC2389STP-R


LETTER SIDE
E
C
B

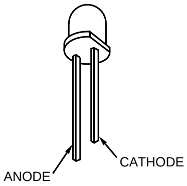
2SC2785-HFE



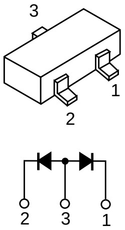
DAN202K
DAN202K-T-146



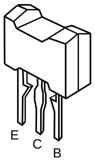
SEL1210S-CD
SEL1210S-D


ANODE
CATHODE

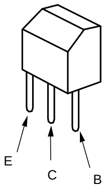
DAP202K
DAP202K-T-146



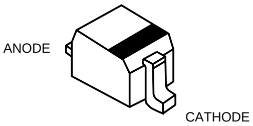
2SC2808STP-R



2SC3209LK
2SC3209LK-TP
2SD774-T-4
2SD774-34



DTZ5.1B
DTZ9.1
RD5.6S-B
UDZ-TE-17-5.1B
UDZ-TE-17-5.6B
UDZ-TE-17-9.1B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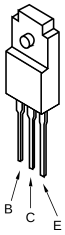
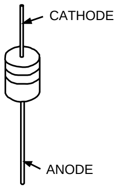
CATHODE

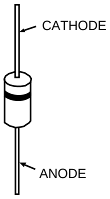
2SC4793
2SD1763A



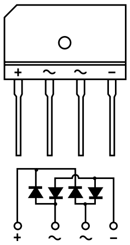
ERA81-004TP1
ERA83-006
MTZJ-T-77-12A
MTZJ-T-77-33C
MTZJ-T-77-3.9B
MTZJ-T-77-5.1
MTZJ-T-77-5.6C
MTZJ-T-77-6.2
MTZJ-T-77-6.8A
MTZJ-T-77-6.8C
MTZJ-T-77-9.1C
MTZJ-12A
MTZJ-33C
RD3.9ES-B2
MTZJ-6.2B
RD5.1ES-B1
RD5.6ESB2
RD6.8ES-B2
RD9.1ES-B3
1SS133T-77


CATHODE
ANODE

BYD33G
BYD33G-AMMO
EG-1Z-V1
EL1Z
ERC06-15S
ERD28-06S
ERD28-08S
FMN-G12S
RGP10GPKG23
RU3YX-LF-C4
RU-3YX-V1
RU4AM-T3
1SS292T-77


CATHODE
ANODE

GBU4JL-6088



SECTION 6

EXPLODED VIEWS

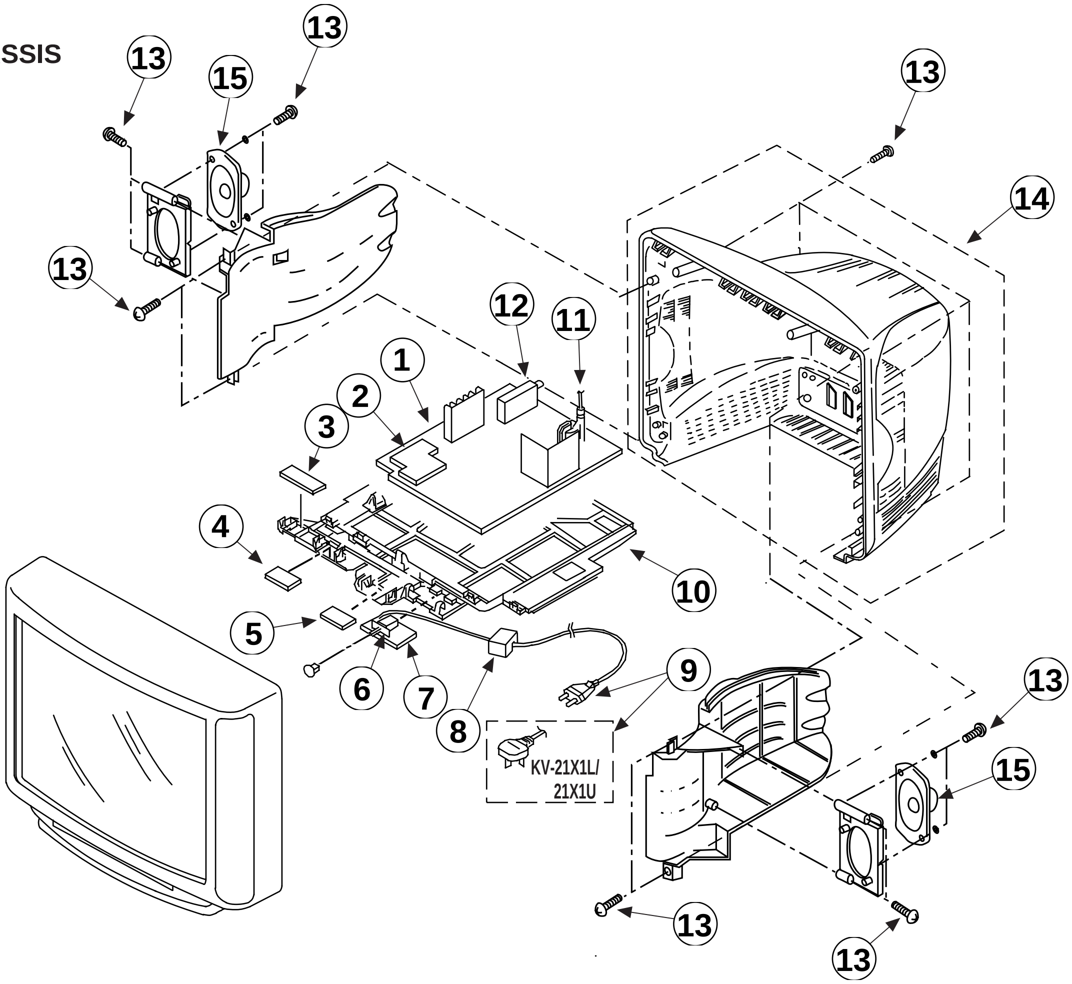
NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

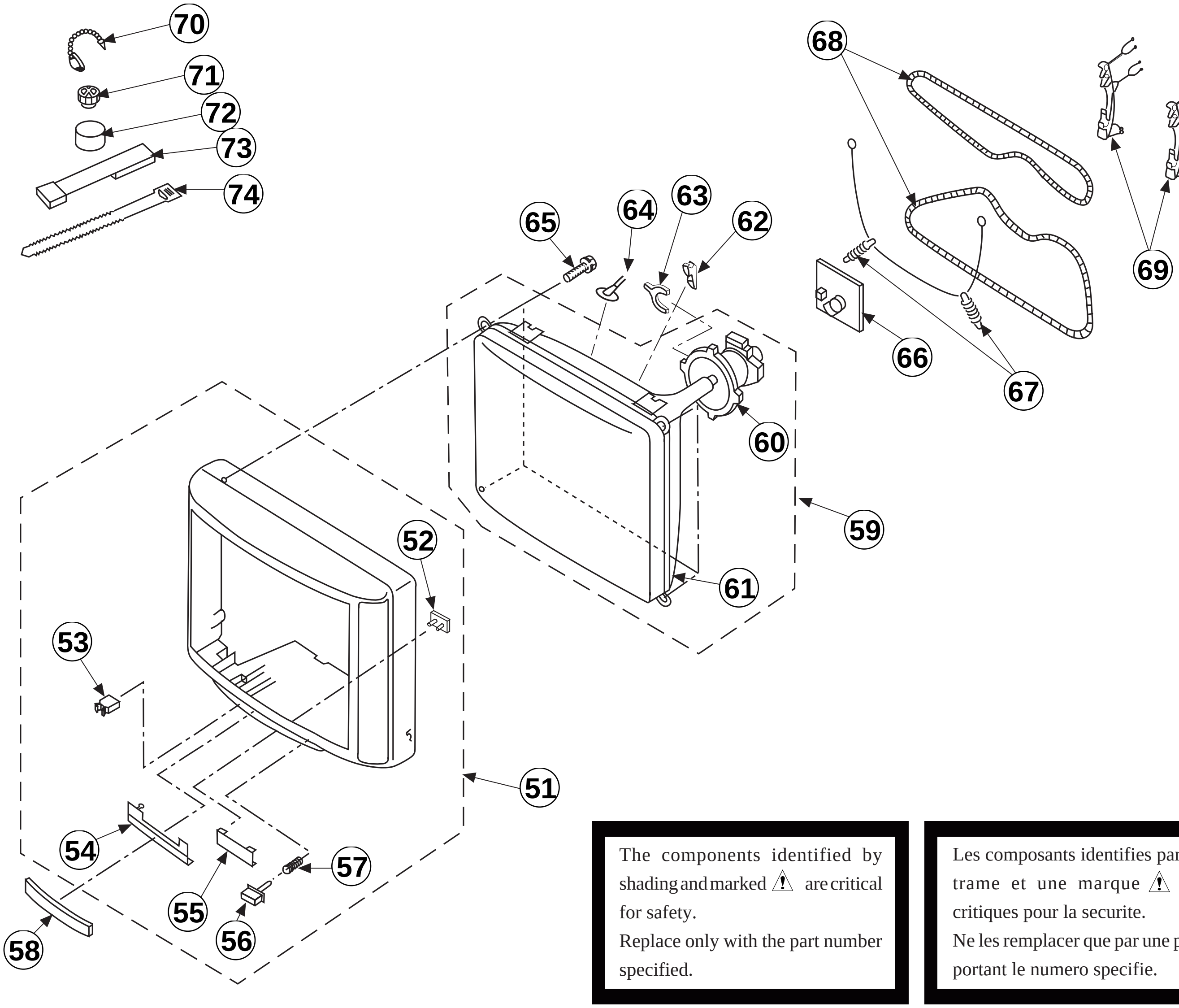
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS



REF NO		PART NO	DESCRIPTION	REMARK
1		*A-1632-549-A	A AND M BOARD, COMPLETE (KV-21X1A)	
		*A-1632-547-A	A AND M BOARD, COMPLETE (KV-21X1B)	
		*A-1632-543-A	A AND M BOARD, COMPLETE (KV-21X1D)	
		*A-1632-548-A	A AND M BOARD, COMPLETE (KV-21X1E)	
		*A-1632-545-A	A AND M BOARD, COMPLETE (KV-21X1K)	
		*A-1632-546-A	A AND M BOARD, COMPLETE (KV-21X1L)	
		*A-1632-544-A	A AND M BOARD, COMPLETE (KV-21X1R)	
		*A-1632-470-A	A AND M BOARD, COMPLETE (KV-21X1U)	
2		*A-1634-042-A	M BOARD, COMPLETE	
3		*A-1646-130-A	H1 BOARD, COMPLETE (KV-21X1A/21X1B/21X1E)	
		*A-1646-118-A	H1 BOARD, COMPLETE (KV-21X1D/21X1K/21X1L/21X1R/21X1U)	
4		*A-1646-132-A	H3 BOARD, COMPLETE (KV-21X1A/21X1B/21X1E)	
		*A-1646-120-A	H3 BOARD, COMPLETE (KV-21X1D/21X1K/21X1L/21X1R/21X1U)	
5		*A-1646-131-A	H2 BOARD, COMPLETE (KV-21X1A/21X1B/21X1E)	
		*A-1646-119-A	H2 BOARD, COMPLETE (KV-21X1D/21X1K/21X1L/21X1R/21X1U)	
6	⚠	1-571-433-21	SWITCH PUSH (AC POWER)	
7		*A-1624-061-A	F1 BOARD, COMPLETE (KV-21X1A/21X1B/21X1E)	
		*A-1624-059-A	F1 BOARD, COMPLETE (KV-21X1D/21X1K/21X1L/21X1R/21X1U)	
8		4-389-201-11	HOLDER, AC CORD	
9	⚠ ⚠	1-765-286-11	CORD POWER (KV-21X1A/21X1D/21X1E/21X1K/21X1R)	2.5A/250V
		1-765-268-11	CORD, CONNECTION (KV-21X1B)	
	⚠ ⚠	1-590-762-11	CORD POWER (WITH PLUG) (KV-21X1L/21X1U)	2.5A/250V
10		*4-203-594-01	BRACKET	
11	⚠	1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2A)	
12		1-693-338-11	TUNER (TUVIF) (AEP) (KV-21X1A/21X1D/21X1E/21X1K/21X1L/21X1R)	
		1-693-340-11	TUNER (TUVIF) (FR) (KV-21X1B)	
		1-693-339-11	TUNER (TUVIF) (UK) (KV-21X1U)	
13		4-039-358-01	SCREW (4X16), (+) BV TAPPING	
14		X-4200-286-1	COVER ASSY REAR (SC)	
15		1-504-819-11	SPEAKER (7.5X13CM)	

6-2. PICTURE TUBE



The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO	PART NO	DESCRIPTION	REMARK
51	X-4200-184-1	BEZNET ASSY	52-57
52	4-202-465-01	GUIDE, LED LIGHT	
53	4-392-036-01	CATCHER PUSH	
54	4-202-642-01	DOOR	
55	4-202-643-21	WINDOW ORNAMENTAL	
56	4-202-637-01	BUTTON POWER	
57	4-202-746-11	SPRING, COMPRESSION	
58	4-202-644-11	ORNAMENT, DOOR	
59	⚠ 8-738-787-71	ITC	60-61
60	⚠ 8-451-295-45	DEFLECTION YOKE (Y21PFA2BA)	
61	⚠ 8-738-784-05	PICTURE TUBE (SD-169) (A51JXH61X)	
62	3-704-495-01	SPACER DY	
63	1-452-277-00	MAGNET, BMC	
64	⚠ 1-540-006-22	CAP ASSY, HIGH-VOLTAGE	
65	4-036-189-01	SCREW (S), PT	
66	*A-1638-102-A	C BOARD, COMPLETE (KV-21X1A/21X1B/21X1E)	
	*A-1638-090-A	C BOARD, COMPLETE (KV-21X1D/21X1K/21X1L/21X1R/21X1U)	
67	4-369-318-31	SPRING TENSION	
68	⚠ 1-406-828-11	COIL DEGAUSSING	
69	*4-386-622-11	BAND, DGC	
70	4-308-870-00	CLIP, LEAD WIRE	
71	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
72	1-452-032-00	MAGNET, DISK; 10MM Ø	
73	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
74	3-701-007-00	BAND, BINDING	

SECTION 7

ELECTRICAL PARTS LIST

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

When indicating parts by reference number, please include the board name.

CAPACITORS
MF : mF, PF : mmF

COILS
MMH : mH, μH : mH

F1 **A and M**

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1624-061-A	F1 BOARD, COMPLETE ******************	(KV-21X1A/21X1B/21X1E)
	*A-1624-059-A	F1 BOARD, COMPLETE ******************	(KV-21X1D/21X1K/21X1L/21X1R/21X1U)
		< CONNECTOR >	
CN603	⚠ *1-580-844-11	PIN, CONNECTOR (POWER)	
CN604	⚠ *1-695-292-11	PIN, CONNECTOR (POWER)	
		< FUSE >	
F601	⚠ 1-532-350-00	FUSE (4A 250V)	
	⚠ *1-533-725-11	HOLDER, FUSE ; F601	
		< SWITCH >	
S601	⚠ 1-571-433-21	SWITCH, PUSH (AC POWER)	

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1632-549-A	A AND M BOARD, COMPLETE ***********************	(KV-21X1A)
	*A-1632-547-A	A AND M BOARD, COMPLETE ***********************	(KV-21X1B)
	*A-1632-543-A	A AND M BOARD, COMPLETE ***********************	(KV-21X1D)
	*A-1632-548-A	A AND M BOARD, COMPLETE ***********************	(KV-21X1E)
	*A-1632-545-A	A AND M BOARD, COMPLETE ***********************	(KV-21X1K)
	*A-1632-546-A	A AND M BOARD, COMPLETE ***********************	(KV-21X1L)
	*A-1632-544-A	A AND M BOARD, COMPLETE ***********************	(KV-21X1R)
	*A-1632-470-A	A AND M BOARD, COMPLETE ***********************	(KV-21X1U)
	1-750-797-11	SOCKET, PLCC	
	4-202-710-11	SPACER, INSULATING	
	*4-368-683-11	SPRING, TRANSISTOR	
	4-382-854-11	SCREW (M3X10), P, SW (+)	
		< CAPACITOR >	
C008	1-126-965-11	ELECT 22MF 20%	50V
C014	1-164-346-11	CERAMIC CHIP 1MF	16V
C015	1-163-121-00	CERAMIC CHIP 150PF 5%	50V
C016	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C019	1-163-037-11	CERAMIC CHIP 0.022MF 10%	50V
C020	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C021	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C022	1-124-903-11	ELECT 1MF 20%	50V
C028	1-163-035-00	CERAMIC CHIP 0.047MF	50V
C029	1-163-077-00	CERAMIC CHIP 0.1MF	50V
C034	1-164-004-11	CERAMIC CHIP 0.1MF 10%	25V
C035	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V
C036	1-126-965-11	ELECT 22MF 20%	50V
C037	1-164-346-11	CERAMIC CHIP 1MF	16V
C038	1-164-346-11	CERAMIC CHIP 1MF	16V
C039	1-163-205-00	CERAMIC CHIP 0.001MF 10%	50V
C040	1-163-037-11	CERAMIC CHIP 0.022MF 10%	50V
C041	1-126-965-11	ELECT 22MF 20%	50V
C042	1-164-004-11	CERAMIC CHIP 0.1MF 10%	25V
C044	1-164-004-11	CERAMIC CHIP 0.1MF 10%	25V
C050	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C051	1-163-097-00	CERAMIC CHIP 15PF 5%	50V
C121	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C122	1-163-249-11	CERAMIC CHIP 82PF 5%	50V
C123	1-163-139-00	CERAMIC CHIP 820PF 5%	50V
C124	1-163-249-11	CERAMIC CHIP 82PF 5%	50V
C131	1-164-232-11	CERAMIC CHIP 0.01MF 10%	50V
C135	1-126-934-11	ELECT 220MF 20%	16V
C136	1-164-004-11	CERAMIC CHIP 0.1MF 10%	25V
C162	1-126-967-11	ELECT 47MF 20%	16V
C201	1-126-965-11	ELECT 22MF 20%	50V
C202	1-126-965-11	ELECT 22MF 20%	50V
C204	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C205	1-126-964-11	ELECT 10MF 20%	50V
C206	1-126-933-11	ELECT 100MF 20%	16V
C207	1-126-933-11	ELECT 100MF 20%	16V
C208	1-126-964-11	ELECT 10MF 20%	50V
C209	1-163-038-00	CERAMIC CHIP 0.1MF	25V
C210	1-163-033-91	CERAMIC CHIP 0.022MF	50V
C211	1-126-965-11	ELECT 22MF 20%	50V
C214	1-163-017-00	CERAMIC CHIP 0.0047MF 10%	50V
C215	1-163-117-00	CERAMIC CHIP 100PF 5%	50V (KV-21X1B)
C216	1-163-109-00	CERAMIC CHIP 47PF 5%	50V
C217	1-163-117-00	CERAMIC CHIP 100PF 5%	50V
C218	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C219	1-126-964-11	ELECT 10MF 20%	50V
C220	1-164-004-11	CERAMIC CHIP 0.1MF 10%	25V
C221	1-163-117-00	CERAMIC CHIP 100PF 5%	50V (KV-21X1B)
C223	1-163-133-00	CERAMIC CHIP 470PF 5%	50V
C224	1-163-133-00	CERAMIC CHIP 470PF 5%	50V

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION			REMARK
C225	1-126-964-11	ELECT	10MF	20%	50V
C226	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C227	1-163-084-00	CERAMIC CHIP	1.5PF	0.25PF	50V
C228	1-163-084-00	CERAMIC CHIP	1.5PF	0.25PF	50V
C229	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C230	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C231	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C232	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C233	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C234	1-163-003-11	CERAMIC CHIP	330PF	10%	50V
C235	1-126-964-11	ELECT	10MF	20%	50V
C236	1-126-964-11	ELECT	10MF	20%	50V
C240	1-107-823-11	CERAMIC CHIP	0.47MF	10%	16V
					(KV-21X1A/21X1B/21X1E)
C242	1-164-346-11	CERAMIC CHIP	1MF		16V
C243	1-164-346-11	CERAMIC CHIP	1MF		16V
C244	1-164-346-11	CERAMIC CHIP	1MF		16V
C245	1-164-346-11	CERAMIC CHIP	1MF		16V
C246	1-126-965-11	ELECT	22MF	20%	50V
C247	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C300	1-126-934-11	ELECT	220MF	20%	16V
C301	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C302	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C303	1-126-965-11	ELECT	22MF	20%	50V
C304	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C305	1-124-257-00	ELECT	2.2MF	20%	50V
C306	1-107-380-11	FILM	0.0082MF	5%	200V
C307	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C308	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C309	1-126-163-11	ELECT	4.7MF	20%	50V
C310	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C312	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C313	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C314	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C315	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C316	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C317	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C319	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C320	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C321	1-126-963-11	ELECT	4.7MF	20%	50V
C322	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
C323	1-163-099-00	CERAMIC CHIP	18PF	5%	50V
C324	1-163-119-00	CERAMIC CHIP	120PF	5%	50V
C325	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C326	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C327	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C328	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C329	1-163-016-00	CERAMIC CHIP	0.0039MF	10%	50V
C330	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C332	1-126-965-11	ELECT	22MF	20%	50V
C333	1-126-965-11	ELECT	22MF	20%	50V
C341	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C345	1-163-139-00	CERAMIC CHIP	820PF	5%	50V
C347	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C348	1-163-031-11	CERAMIC CHIP	0.01MF		50V
					(KV-21X1B)
C349	1-126-965-11	ELECT	22MF	20%	50V
					(KV-21X1B)
C350	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C353	1-163-125-00	CERAMIC CHIP	220PF	5%	50V

REF.NO.		PART NO.	DESCRIPTION			REMARK
C354		1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C358		1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C359		1-126-965-11	ELECT	22MF	20%	50V
C360		1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C401		1-126-967-11	ELECT	47MF	20%	16V
C402		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C403		1-164-346-11	CERAMIC CHIP	1MF		16V
C404		1-164-346-11	CERAMIC CHIP	1MF		16V
C405		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C406		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C410		1-126-967-11	ELECT	47MF	20%	16V
C413		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C415		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C416		1-126-965-11	ELECT	22MF	20%	50V
C417		1-126-965-11	ELECT	22MF	20%	50V
C418		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C419		1-164-346-11	CERAMIC CHIP	1MF		16V
C420		1-164-346-11	CERAMIC CHIP	1MF		16V
C421		1-164-337-11	CERAMIC CHIP	2.2MF		16V
C422		1-164-337-11	CERAMIC CHIP	2.2MF		16V
C423		1-164-337-11	CERAMIC CHIP	2.2MF		16V
C500		1-130-489-00	FILM	0.033MF	5%	50V
C501		1-126-963-11	ELECT	4.7MF	20%	50V
C502		1-163-077-00	CERAMIC CHIP	0.1MF		50V
C503		1-126-952-11	ELECT	1000MF	20%	35V
C504		1-126-968-11	ELECT	100MF	20%	50V
C505		1-126-941-11	ELECT	470MF	20%	25V
C506		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C507		1-126-965-11	ELECT	22MF	20%	50V
C508		1-130-785-11	MYLAR	0.47MF	10%	100V
C510		1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C511		1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C601	⚠	1-136-212-12	FILM	0.1MF	20%	300V
C602	⚠	1-136-212-12	FILM	0.1MF	20%	300V
C603	⚠	1-113-937-11	CERAMIC	0.0022MF	20%	250V
C604	⚠	1-113-937-11	CERAMIC	0.0022MF	20%	250V
C605	⚠	1-162-599-12	CERAMIC	0.0047MF		250V
C606	⚠	1-162-599-12	CERAMIC	0.0047MF		250V
C609		1-102-228-00	CERAMIC	470PF	10%	500V
C610		1-104-665-11	ELECT	100MF	20%	25V
C611		1-136-538-11	FILM	0.001MF	3%	2KV
C612		1-107-929-11	ELECT	10MF	20%	100V
C613		1-162-318-11	CERAMIC	0.001MF	10%	500V
C614		1-104-666-11	ELECT	220MF	20%	25V
C615		1-124-347-00	ELECT	100MF	20%	160V
C616		1-162-116-00	CERAMIC	680PF	10%	2KV
C617		1-107-929-11	ELECT	10MF	20%	100V
C618		1-102-228-00	CERAMIC	470PF	10%	500V
C619		1-126-942-61	ELECT	1000MF	20%	25V
C620		1-126-941-11	ELECT	470MF	20%	25V
C621		1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C622		1-126-965-11	ELECT	22MF	20%	50V
C623		1-124-618-11	ELECT	2200MF	20%	35V
C624		1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C625		1-126-967-11	ELECT	47MF	20%	50V
C626		1-102-228-00	CERAMIC	470PF	10%	500V
C627		1-111-097-11	ELECT	0.0022F	20%	35V
C628		1-126-964-11	ELECT	10MF	20%	50V
C629		1-124-455-00	ELECT	100MF	20%	16V
C630		1-113-473-11	ELECT(BLOCK)	180MF	20%	400V

A and M

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C632	1-106-220-00	MYLAR	0.1MF	10%	100V
C633	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C634	1-104-665-11	ELECT	100MF	20%	25V
C635	1-111-097-11	ELECT	0.0022F	20%	35V
C636	1-102-228-00	CERAMIC	470PF	10%	500V
C638	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C639	1-102-228-00	CERAMIC	470PF	10%	500V
C640	1-102-110-00	CERAMIC	220PF	10%	50V
C641	1-104-797-11	ELECT	0.47MF	20%	100V
C645	1-104-665-11	ELECT	100MF	20%	25V
C800	1-107-650-11	ELECT	3.3MF	20%	250V
C801	1-129-746-00	FILM	0.039MF	10%	400V
C802	1-136-079-00	FILM	0.01MF	3%	2KV
C803	1-136-109-00	FILM	0.68MF	5%	200V
C804	1-124-902-00	ELECT	0.47MF	20%	50V
C805	1-102-228-00	CERAMIC	470PF	10%	500V
C806	1-102-244-00	CERAMIC	220PF	10%	500V
C807	1-107-651-11	ELECT	4.7MF	20%	250V
C809	1-161-754-00	CERAMIC	0.001MF	10%	2KV
C810	1-129-702-00	FILM	0.001MF	10%	400V
C812	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C814	1-136-159-00	FILM	0.033MF	5%	50V
C815	1-162-116-00	CERAMIC	680PF	10%	2KV
C817	1-136-559-11	MYLAR	0.0047MF	10%	400V
C818	1-136-933-11	FILM	1MF	5%	100V
C819	1-162-318-11	CERAMIC	0.001MF	10%	500V
C820	1-126-951-11	ELECT	470MF	20%	35V
C822	1-104-696-11	FILM	0.015MF	10%	100V
C823	1-106-375-12	MYLAR	0.022MF	10%	250V
C824	1-106-367-00	MYLAR	0.01MF	10%	400V
C825	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C826	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C827	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C828	1-124-903-11	ELECT	1MF	20%	50V
C1001	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C1002	1-126-395-11	ELECT	22MF	20%	16V
C1003	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C1004	1-126-395-11	ELECT	22MF	20%	16V
C1005	1-164-492-11	CERAMIC CHIP	0.15MF	10%	16V
C1006	1-163-078-11	CERAMIC CHIP	0.033MF	10%	25V
C1007	1-163-078-11	CERAMIC CHIP	0.033MF	10%	25V
C1008	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C1009	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C1010	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C1011	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1012	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C1013	1-126-206-11	ELECT	100MF	20%	6.3V
C1014	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C1015	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C1016	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1017	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C1200	1-136-165-00	FILM	0.1MF	5%	50V
C1201	1-136-173-00	FILM	0.47MF	5%	50V
C1202	1-136-173-00	FILM	0.47MF	5%	50V
C1203	1-136-169-00	FILM	0.22MF	5%	50V
C1204	1-136-169-00	FILM	0.22MF	5%	50V
C1205	1-101-004-00	CERAMIC	0.01MF		50V
C1206	1-101-004-00	CERAMIC	0.01MF		50V
C1215	1-136-173-00	FILM	0.47MF	5%	50V
C1216	1-137-366-11	FILM	0.0022MF	5%	50V
C1217	1-137-366-11	FILM	0.0022MF	5%	50V

< FILTER >

REF.NO.	PART NO.	DESCRIPTION
CF200	1-409-327-00	TRAP, CERAMIC (6.5MHZ) (KV-21X1B)
CF1001	1-767-120-21	VIBRATOR, CERAMIC (8MHz)

< CONNECTOR >

REF.NO.	PART NO.	DESCRIPTION
CN001	*1-568-880-51	PIN, CONNECTOR 5P
CN081	*1-568-881-51	PIN, CONNECTOR 6P
CN082	*1-568-880-51	PIN, CONNECTOR 5P
CN201	*1-568-879-11	PIN, CONNECTOR 4P
CN402	*1-564-512-11	PLUG, CONNECTOR 9P
CN403	*1-568-878-51	PIN, CONNECTOR 3P
CN404	*1-568-879-11	PIN, CONNECTOR 4P
CN601 ⚠	*1-695-292-11	PIN, CONNECTOR (POWER)
CN602 ⚠	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P
CN603 ⚠	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P
CN801	*1-580-798-11	CONNECTOR PIN (DY) 6P

< DIODE >

REF.NO.	PART NO.	DESCRIPTION
D002	8-719-982-27	DIODE MTZJ-33C
D003	8-719-991-33	DIODE 1SS133T-77
D004	8-719-991-33	DIODE 1SS133T-77
D005	8-719-914-43	DIODE DAN202K
D006	8-719-914-43	DIODE DAN202K
D007	8-719-914-43	DIODE DAN202K
D009	8-719-976-99	DIODE DTZ5.1B
D011	8-719-976-99	DIODE DTZ5.1B
D015	8-719-914-44	DIODE DAP202K
D201	8-719-976-99	DIODE DTZ5.1B
D301	8-719-991-33	DIODE 1SS133T-77
D302	8-719-991-33	DIODE 1SS133T-77
D307	8-719-991-33	DIODE 1SS133T-77 (KV-21X1B)
D308	8-719-991-33	DIODE 1SS133T-77 (KV-21X1B)
D401	8-719-109-97	DIODE RD6.8ES-B2
D402	8-719-109-97	DIODE RD6.8ES-B2
D403	8-719-109-97	DIODE RD6.8ES-B2
D404	8-719-109-97	DIODE RD6.8ES-B2
D405	8-719-109-97	DIODE RD6.8ES-B2
D406	8-719-109-97	DIODE RD6.8ES-B2
D407	8-719-109-97	DIODE RD6.8ES-B2
D408	8-719-110-14	DIODE RD9.1ES-B3
D409	8-719-110-14	DIODE RD9.1ES-B3
D410	8-719-110-14	DIODE RD9.1ES-B3
D411	8-719-991-33	DIODE 1SS133T-77
D412	8-719-109-97	DIODE RD6.8ES-B2
D415	8-719-110-14	DIODE RD9.1ES-B3
D416	8-719-977-22	DIODE DTZ9.1
D417	8-719-977-22	DIODE DTZ9.1
D501	8-719-302-43	DIODE EL1Z
D602	8-719-991-33	DIODE 1SS133T-77
D603	8-719-109-97	DIODE RD6.8ES-B2
D604	8-719-302-43	DIODE EL1Z
D605	8-719-302-43	DIODE EL1Z
D606	8-719-980-78	DIODE ERA83-006
D607	8-719-046-78	DIODE EG-1Z-V1
D608	8-719-302-43	DIODE EL1Z
D609	8-719-312-10	DIODE RU4AM-T3
D610	8-719-025-88	DIODE GBU4JL-6088
D611	8-719-980-78	DIODE ERA83-006

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D612	8-719-046-76	DIODE RU-3YX-V1	
D613	8-719-058-38	DIODE FMN-G12S	
D614	8-719-109-89	DIODE RD5.6ESB2	
D615	8-719-302-43	DIODE EL1Z	
D616	8-719-921-54	DIODE MTZJ-6.2B	
D617	8-719-991-33	DIODE 1SS133T-77	
D619	8-719-980-78	DIODE ERA83-006	
D620	8-719-110-14	DIODE RD9.1ES-B3	
D621	8-719-058-38	DIODE FMN-G12S	
D622	8-719-991-33	DIODE 1SS133T-77	
D623	8-719-921-83	DIODE MTZJ-12A	
D625	8-719-991-33	DIODE 1SS133T-77	
D626	8-719-302-43	DIODE EL1Z	
D627	8-719-991-33	DIODE 1SS133T-77	
D801	8-719-950-57	DIODE BYD33G	
D802	8-719-302-43	DIODE EL1Z	
D803	8-719-945-80	DIODE ERC06-15S	
D805	8-719-928-08	DIODE ERD28-08S	
D806	8-719-302-43	DIODE EL1Z	
D807	8-719-991-33	DIODE 1SS133T-77	
D809	8-719-302-43	DIODE EL1Z	
D1200	8-719-109-72	DIODE RD3.9ES-B2	

< FERRITE BEAD >

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB600	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB602	1-412-911-11	INDUCTOR, FERRITE BEAD 1.1UH	
FB603	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB605	1-412-911-11	INDUCTOR, FERRITE BEAD 1.1UH	
FB606	1-412-911-11	INDUCTOR, FERRITE BEAD 1.1UH	
FB607	1-412-911-11	INDUCTOR, FERRITE BEAD 1.1UH	
FB1001	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB1002	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB1003	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	

< ENCAPSULATED FILTER >

REF.NO.	PART NO.	DESCRIPTION	REMARK
FL201	1-239-803-11	FILTER, EMI	

< IC >

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC004	8-759-250-69	IC TEA2124	
IC005	8-759-510-54	IC PST572D	
IC200	8-759-429-97	IC MSP3400C-PP-C6	(KV-21X1A/21X1D/21X1K/21X1R)
	8-759-429-98	IC MSP3410B-PP-F7	(KV-21X1B/21X1E/21X1L/21X1U)
IC201	8-759-502-21	IC TDA2822M	
IC301	8-759-333-45	IC MC44002P	
IC302	8-759-333-46	IC MC44140P	
IC401	8-759-064-91	IC NJM2233BL	
IC501	8-759-192-71	IC STV9379	
	4-202-373-01	SPRING, IC ; IC501	
IC600	8-749-924-99	IC STR-S6707	
	4-202-373-01	SPRING, IC ; IC600	
IC601	8-749-010-64	PHOTO COUPLER PC123F2	
IC602	8-749-920-61	IC SE-135N	
IC603 ⚠	8-759-507-29	IC LM7808CT	
IC604	8-759-250-63	IC TL750L05CLPR	
IC605	8-759-510-52	IC L4941BV	
	4-202-373-01	SPRING, IC ; IC605	
IC1002	8-759-440-72	IC SDA5250M-C9-GEG	
IC1003	8-759-432-32	IC ST24W04FM6TR	
IC1004	8-759-440-74	IC M27C512-90C1-BE5-1	
IC1200	8-759-250-68	IC TDA7264	
	4-202-373-01	SPRING, IC ; IC1200	

< SOCKET >

REF.NO.	PART NO.	DESCRIPTION	REMARK
J401	1-695-581-11	CONNECTOR, D SUB	

< COIL >

REF.NO.	PART NO.	DESCRIPTION	REMARK
L002	1-410-200-31	INDUCTOR CHIP 4.7UH	
L108	1-412-522-41	INDUCTOR 5.6UH	
L111	1-408-408-00	INDUCTOR 8.2UH	
L112	1-408-397-00	INDUCTOR 1UH	
L113	1-408-408-00	INDUCTOR 8.2UH	
L200	1-408-406-00	INDUCTOR 5.6UH	(KV-21X1B)
L203	1-410-385-11	INDUCTOR CHIP 22UH	
L204	1-410-385-11	INDUCTOR CHIP 22UH	
L301	1-412-002-31	INDUCTOR CHIP 4.7UH	
L302	1-408-607-31	INDUCTOR 22UH	
L409	1-408-409-00	INDUCTOR 10UH	
L609	1-412-533-21	INDUCTOR 47UH	
L611	1-412-533-21	INDUCTOR 47UH	
L612	1-412-522-41	INDUCTOR 5.6UH	
L613	1-412-522-41	INDUCTOR 5.6UH	
L800	1-412-553-11	INDUCTOR 3.3MMH	
L801	1-420-872-00	COIL, AIR-CORE	
L802	1-411-635-11	COIL, AIR-CORE	
L803	1-459-390-00	COIL (WITH CORE)	
L804	1-459-105-21	COIL(WITH CORE)	
L805	1-412-531-31	INDUCTOR 33UH	
L806	1-459-652-12	HLC	
L1001	1-408-405-00	INDUCTOR 4.7UH	

< IC LINK >

REF.NO.	PART NO.	DESCRIPTION	REMARK
PS600 ⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	
PS601 ⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	
PS602 ⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	
PS603 ⚠	1-532-686-21	LINK, IC 2.7A (ICP-F75)	

< TRANSISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q002	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q006	8-729-216-22	TRANSISTOR 2SA1162-G	
Q007	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q008	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q009	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q011	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q012	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q013	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q014	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q015	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q110	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q118	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q200	8-729-900-53	TRANSISTOR DTC114EK	
Q201	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q202	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q204	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q205	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q207	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-21X1B)
Q208	8-729-216-22	TRANSISTOR 2SA1162-G	(KV-21X1B)
Q209	8-729-920-74	TRANSISTOR 2SC2412K-QR	(KV-21X1B)

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REF.NO.	PART NO.	DESCRIPTION	REMARK
Q210	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q300	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q301	8-729-900-53	TRANSISTOR DTC114EK	
Q302	8-729-900-53	TRANSISTOR DTC114EK	
Q303	8-729-900-53	TRANSISTOR DTC114EK	
Q304	8-729-900-53	TRANSISTOR DTC114EK	
Q305	8-729-900-53	TRANSISTOR DTC114EK	
Q306	8-729-900-53	TRANSISTOR DTC114EK	
Q307	8-729-026-41	TRANSISTOR 2SA933AS-QRT	(KV-21X1B)
Q310	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q311	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q312	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q402	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q403	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q404	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q405	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q406	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q407	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q408	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q500	8-729-017-06	TRANSISTOR 2SC4793	
Q501	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q601	8-729-025-04	TRANSISTOR 2SC3852A	
Q602	8-729-320-28	TRANSISTOR 2SA1667	
Q603	8-729-027-08	TRANSISTOR 2SC2389STP-R	
Q604	8-729-024-35	TRANSISTOR 2SC2808STP-R	
Q606	8-729-029-56	TRANSISTOR DTA144ESA	
Q608	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q617	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q801	8-729-140-50	TRANSISTOR 2SC3209LK	
Q802	8-729-033-85	TRANSISTOR S2000N-16E305A	
Q803	8-729-027-59	TRANSISTOR DTC144EKA-T146	
Q804	8-729-019-01	TRANSISTOR 2SD2394-EF	
Q805	8-729-140-96	TRANSISTOR 2SD774-34	
Q1200	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1201	8-729-920-74	TRANSISTOR 2SC2412K-QR	
		< RESISTOR >	
JR17	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR39	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR43	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR45	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR47	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR51	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR52	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR55	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR56	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR57	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR59	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR60	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR61	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR62	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR66	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR69	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR003	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR004	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR006	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR007	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR008	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR009	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR010	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR011	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR012	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR013	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR015	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR016	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR018	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR019	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR020	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR021	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR022	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR023	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR024	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR025	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR026	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR028	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR029	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR030	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR032	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR033	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR034	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR036	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR038	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR040	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR043	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR046	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR071	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR072	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR1001	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR1002	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R001	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R005	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R007	1-216-238-91	METAL GLAZE 47K 5% 1/8W	
R010	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R012	1-249-437-11	CARBON 47K 5% 1/4W	
R015	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R017	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R018	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R019	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R020	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R021	1-216-262-00	METAL GLAZE 470K 5% 1/8W	
R022	1-216-238-91	METAL GLAZE 47K 5% 1/8W	
R023	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R025	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R026	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R027	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R028	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R029	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R030	1-215-900-11	METAL OXIDE 22K 5% 2W	F
R031	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R032	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R034	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R036	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R037	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R038	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R040	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R041	1-216-238-91	METAL GLAZE 47K 5% 1/8W	
R044	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R045	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R046	1-216-254-00	METAL GLAZE 220K 5% 1/8W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R047	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R049	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R050	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R051	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R052	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R053	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R064	1-216-222-00	METAL GLAZE 10K 5% 1/8W	
R065	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R066	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R067	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R068	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R069	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R070	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R075	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R076	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R078	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R088	1-216-027-00	METAL GLAZE 120 5% 1/10W	
R089	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R090	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R097	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R098	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R099	1-216-200-11	METAL GLAZE 1.2K 5% 1/8W	
R110	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R111	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R112	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R113	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R114	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R115	1-216-190-00	METAL GLAZE 470 5% 1/8W	
R116	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R117	1-216-222-00	METAL GLAZE 10K 5% 1/8W	
R118	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R119	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R120	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R124	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R125	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R126	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R134	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R163	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R174	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R200	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R201	1-249-389-11	CARBON 4.7 5% 1/4W	F
R202	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R203	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R204	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R205	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R207	1-249-389-11	CARBON 4.7 5% 1/4W	F
R209	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R210	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R211	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R213	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R214	1-216-174-00	METAL GLAZE 100 5% 1/8W	
R215	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R218	1-216-037-00	METAL GLAZE 330 5% 1/10W	(KV-21X1B)
R219	1-216-049-00	METAL GLAZE 1K 5% 1/10W	(KV-21X1B)
R220	1-216-045-00	METAL GLAZE 680 5% 1/10W	(KV-21X1B)
R221	1-216-033-00	METAL GLAZE 220 5% 1/10W	(KV-21X1B)

REF.NO.	PART NO.	DESCRIPTION	REMARK
R222	1-216-001-00	METAL GLAZE 10 5% 1/10W	(KV-21X1B)
R223	1-216-041-00	METAL GLAZE 470 5% 1/10W	(KV-21X1B)
R224	1-216-025-00	METAL GLAZE 100 5% 1/10W	(KV-21X1B)
R225	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R226	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R227	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R228	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	(KV-21X1B)
R229	1-216-073-00	METAL GLAZE 10K 5% 1/10W	(KV-21X1B)
R230	1-216-025-00	METAL GLAZE 100 5% 1/10W	(KV-21X1B)
R231	1-216-035-00	METAL GLAZE 270 5% 1/10W	(KV-21X1B)
R236	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R237	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R238	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R239	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R240	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R301	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R302	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R303	1-216-090-00	METAL GLAZE 51K 5% 1/10W	
R304	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R305	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R306	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R307	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R308	1-216-085-00	METAL GLAZE 33K 5% 1/10W	
R309	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R310	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R311	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R312	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R313	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R314	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R315	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R316	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R317	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R318	1-216-019-00	METAL GLAZE 56 5% 1/10W	
R322	1-216-022-00	METAL GLAZE 75 5% 1/10W	
R323	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R325	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R327	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R328	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R332	1-216-093-00	METAL GLAZE 68K 5% 1/10W	(KV-21X1A/21X1B/21X1E)
	1-216-089-00	METAL GLAZE 47K 5% 1/10W	(KV-21X1D/21X1K/21X1L/21X1R/21X1U)
R333	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R334	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R335	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R336	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R337	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R339	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R340	1-216-270-00	METAL GLAZE 1M 5% 1/8W	
R341	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R342	1-216-189-00	METAL GLAZE 430 5% 1/8W	
R343	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R344	1-216-295-00	METAL GLAZE 0 5% 1/10W	

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The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R345	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R347	1-216-041-00	METAL GLAZE	470	5%	1/10W	(KV-21X1B)
R348	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-21X1B)
R349	1-216-105-91	METAL GLAZE	220K	5%	1/10W	(KV-21X1B)
R350	1-216-033-00	METAL GLAZE	220	5%	1/10W	(KV-21X1B)
R351	1-216-292-11	METAL GLAZE	8.2M	5%	1/8W	
R352	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R354	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R355	1-216-121-91	METAL GLAZE	1M	5%	1/10W	
R356	1-216-119-00	METAL GLAZE	820K	5%	1/10W	
R357	1-216-093-00	METAL GLAZE	68K	5%	1/10W	(KV-21X1A/21X1B/21X1E)
	1-216-089-00	METAL GLAZE	47K	5%	1/10W	(KV-21X1D/21X1K/21X1L/21X1R/21X1U)
R359	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R360	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R361	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R362	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R363	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R364	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R365	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R366	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R367	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R368	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R369	1-216-238-91	METAL GLAZE	47K	5%	1/8W	
R401	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R402	1-247-807-31	CARBON	100	5%	1/4W	
R403	1-247-807-31	CARBON	100	5%	1/4W	
R404	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R405	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R406	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R407	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R408	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R409	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R410	1-216-171-00	METAL GLAZE	75	5%	1/8W	
R411	1-216-091-00	METAL GLAZE	56K	5%	1/10W	
R412	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R413	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R414	1-260-311-11	CARBON	39	5%	1/2W	
R415	1-260-311-11	CARBON	39	5%	1/2W	
R416	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R417	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R418	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R419	1-216-113-00	METAL GLAZE	470K	5%	1/10W	
R420	1-247-807-31	CARBON	100	5%	1/4W	
R421	1-247-807-31	CARBON	100	5%	1/4W	
R422	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R423	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R424	1-216-093-00	METAL GLAZE	68K	5%	1/10W	
R425	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R426	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R427	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R428	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R429	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R430	1-216-009-00	METAL GLAZE	22	5%	1/10W	
R501	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R502	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	
R503	1-216-230-00	METAL GLAZE	22K	5%	1/8W	
R504	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R505	1-216-075-00	METAL GLAZE	12K	5%	1/10W	
R506	1-216-080-00	METAL GLAZE	20K	5%	1/10W	
R507	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R508	1-215-865-11	METAL OXIDE	220	5%	1W	F
R509	1-249-383-11	CARBON	1.5	5%	1/4W	F
R510	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W	
R513	1-249-426-11	CARBON	5.6K	5%	1/4W	
R514	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R515	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R601 ⚠	1-202-962-11	WIREWOUND	3.3	5%	10W	
R602	1-249-417-11	CARBON	1K	5%	1/4W	
R603	1-215-898-11	METAL OXIDE	10K	5%	2W	F
R604	1-215-902-11	METAL OXIDE	47K	5%	2W	F
R605	1-216-364-11	METAL OXIDE	0.39	5%	2W	F
R607	1-215-858-00	METAL OXIDE	15	5%	1W	F
R608	1-216-365-00	METAL OXIDE	0.47	5%	2W	F
R609	1-249-420-11	CARBON	1.8K	5%	1/4W	
R610	1-249-415-11	CARBON	680	5%	1/4W	
R611	1-216-354-11	METAL OXIDE	2.7	5%	1W	F
R612 ⚠	1-260-135-11	CARBON	1M	5%	1/2W	
R613	1-249-417-11	CARBON	1K	5%	1/4W	
R614 ⚠	1-218-265-11	METAL	8.2M	5%	1W	
R615	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R616	1-215-479-00	METAL	270K	1%	1/4W	
R617	1-215-877-11	METAL OXIDE	22K	5%	1W	F
R618	1-247-863-91	CARBON	22K	5%	1/4W	
R619	1-249-424-11	CARBON	3.9K	5%	1/4W	
R620	1-247-895-91	CARBON	470K	5%	1/4W	
R621	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R622	1-249-437-11	CARBON	47K	5%	1/4W	
R623	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R632	1-247-807-31	CARBON	100	5%	1/4W	
R634	1-249-397-11	CARBON	22	5%	1/4W	F
R635	1-249-437-11	CARBON	47K	5%	1/4W	
R636	1-249-417-11	CARBON	1K	5%	1/4W	
R637	1-247-815-91	CARBON	220	5%	1/4W	
R638	1-247-863-91	CARBON	22K	5%	1/4W	
R645	1-249-422-11	CARBON	2.7K	5%	1/4W	
R646	1-249-382-11	CARBON	1.2	5%	1/4W	F
R647	1-202-933-61	FUSIBLE	0.1	10%	1/2W	F
R648	1-249-407-11	CARBON	150	5%	1/4W	
R651	1-215-902-11	METAL OXIDE	47K	5%	2W	F
R800	1-215-887-00	METAL OXIDE	150	5%	2W	F
R801	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R802	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R803	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R804	1-215-917-11	METAL OXIDE	1K	5%	3W	F
R805	1-215-897-11	METAL OXIDE	6.8K	5%	2W	F
R806	1-216-349-00	METAL OXIDE	1	5%	1W	F
R807	1-249-399-11	CARBON	33	5%	1/4W	
R808	1-260-115-11	CARBON	22K	5%	1/2W	
R809	1-216-476-11	METAL OXIDE	180	5%	3W	F
R810	1-247-895-91	CARBON	470K	5%	1/4W	
R811	1-216-455-11	METAL OXIDE	560	5%	2W	F
R813	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R814	1-217-811-11	FUSIBLE	0.47	5%	1/4W	
R815	1-216-101-00	METAL GLAZE	150K	5%	1/10W	

The components identified by shading and marked ⚠ are critical for safety.
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Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION				REMARK
R816	1-216-366-00	METAL OXIDE	0.56	5%	2W	F
R817	1-216-447-00	METAL OXIDE	27	5%	2W	F
R818	1-260-115-11	CARBON	22K	5%	1/2W	
R819	1-249-441-11	CARBON	100K	5%	1/4W	
R820	1-217-820-11	FUSIBLE	3.3K	5%	1/4W	
R821	1-216-295-00	METAL GLAZE	0	5%	1/10W	
R822	1-216-107-00	METAL GLAZE	270K	5%	1/10W	
R823	1-249-413-11	CARBON	470	5%	1/4W	
R824	1-216-125-00	METAL GLAZE	1.5M	5%	1/10W	
R825	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R826	1-216-296-00	METAL GLAZE	0	5%	1/8W	
R828	1-216-115-00	METAL GLAZE	560K	5%	1/10W	
R841	1-217-371-00	FUSIBLE	0.47	10%	1/4W	F
R1001	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1002	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R1003	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R1004	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1005	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1006	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W	
R1009	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1010	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1011	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1012	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1013	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1014	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1015	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1016	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1017	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1019	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1020	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1021	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1022	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1023	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1024	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1025	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1026	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1027	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1028	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1029	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1030	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1031	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1032	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1033	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1034	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1035	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1036	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1037	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1038	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1039	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1040	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1041	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1042	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R1043	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R1200	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W	
R1201	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R1202	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R1203	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R1208	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R1209	1-212-849-00	FUSIBLE	4.7	5%	1/4W	F
R1211	1-249-424-11	CARBON	3.9K	5%	1/4W	
R1212	1-249-424-11	CARBON	3.9K	5%	1/4W	

< RELAY >

REF.NO.	PART NO.	DESCRIPTION	REMARK
RY600 ⚠	1-755-018-11	RELAY	

< TRANSFORMER >

REF.NO.	PART NO.	DESCRIPTION	REMARK
T601 ⚠	1-427-962-21	TRANSFORMER, LINE FILTER	
T602 ⚠	1-429-840-11	TRANSFORMER, CONVERTER	
T801	1-437-090-31	HDT	
T802 ⚠	1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2A)	

< THERMISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
THP601 ⚠	1-809-827-11	THERMISTOR, POSITIVE	

< TUNER >

REF.NO.	PART NO.	DESCRIPTION	REMARK
TU101	1-693-338-11	TUNER/VIF (AEP) (KV-21X1A/21X1D/21X1E/21X1K/21X1L/21X1R)	
	1-693-340-11	TUNER/VIF (FR) (KV-21X1B)	
	1-693-339-11	TUNER/VIF (UK) (KV-21X1U)	

< CRYSTAL >

REF.NO.	PART NO.	DESCRIPTION	REMARK
X201	1-760-628-11	VIBRATOR, CRYSTAL (18.432MHz)	
X301	1-760-907-21	VIBRATOR, CRYSTAL (14.318MHz)	
X302	1-760-710-21	VIBRATOR, CRYSTAL (17.472MHz)	

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*A-1634-042-A M BOARD, COMPLETE
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1-750-797-11 SOCKET, PLCC

< CAPACITOR >

REF.NO.	PART NO.	DESCRIPTION				REMARK
C1001	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C1002	1-126-395-11	ELECT	22MF	20%	16V	
C1003	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V	
C1004	1-126-395-11	ELECT	22MF	20%	16V	
C1005	1-164-492-11	CERAMIC CHIP	0.15MF	10%	16V	
C1006	1-163-078-11	CERAMIC CHIP	0.033MF	10%	25V	
C1007	1-163-078-11	CERAMIC CHIP	0.033MF	10%	25V	
C1008	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C1009	1-163-109-00	CERAMIC CHIP	47PF	5%	50V	
C1010	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V	
C1011	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C1012	1-163-105-00	CERAMIC CHIP	33PF	5%	50V	
C1013	1-126-206-11	ELECT	100MF	20%	6.3V	
C1014	1-163-105-00	CERAMIC CHIP	33PF	5%	50V	
C1015	1-164-505-11	CERAMIC CHIP	2.2MF		16V	
C1016	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C1200	1-136-165-00	FILM	0.1MF	5%	50V	
C1201	1-136-173-00	FILM	0.47MF	5%	50V	
C1202	1-136-173-00	FILM	0.47MF	5%	50V	
C1203	1-136-169-00	FILM	0.22MF	5%	50V	
C1204	1-136-169-00	FILM	0.22MF	5%	50V	
C1205	1-101-004-00	CERAMIC	0.01MF		50V	
C1206	1-101-004-00	CERAMIC	0.01MF		50V	
C1215	1-136-173-00	FILM	0.47MF	5%	50V	
C1216	1-137-366-11	FILM	0.0022MF	5%	50V	
C1217	1-137-366-11	FILM	0.0022MF	5%	50V	

M C

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< FILTER >

REF.NO.	PART NO.	DESCRIPTION	REMARK
CF1001	1-767-120-21	VIBRATOR, CERAMIC (8MHz)	

< FERRITE BEAD >

REF.NO.	PART NO.	DESCRIPTION	REMARK
FB1001	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB1002	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB1003	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	

< IC >

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC1002	8-759-440-72	IC SDA5250M-C9-GEG	
IC1003	8-759-432-32	IC ST24W04FM6TR	
IC1004	8-759-440-74	IC M27C512-90C1-BE5-1	
IC1200	8-759-250-68	IC TDA7264	
	4-202-373-01	SPRING, IC ; IC1200	

< COIL >

REF.NO.	PART NO.	DESCRIPTION	REMARK
L1001	1-408-405-00	INDUCTOR 4.7UH	

< RESISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
JR1001	1-216-295-00	METAL GLAZE 0 5% 1/10W	
JR1002	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R1001	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1002	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R1003	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R1004	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R1005	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R1006	1-216-129-00	METAL GLAZE 2.2M 5% 1/10W	
R1009	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1010	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1011	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1012	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1013	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1014	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1015	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1016	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1017	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1019	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1020	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1021	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1022	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1023	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1024	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1025	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1026	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1027	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1028	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1029	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1030	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1031	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1032	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1033	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1034	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1035	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1036	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1037	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1038	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1039	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1040	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1041	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1042	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1043	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1638-102-A	C BOARD, COMPLETE (KV-21X1A/21X1B/21X1E) *****************	
	*A-1638-090-A	C BOARD, COMPLETE (KV-21X1D/21X1K/21X1L/21X1R/21X1U) *****************	

< CAPACITOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
C701	1-102-117-00	CERAMIC 820PF 10% 50V	
C702	1-102-117-00	CERAMIC 820PF 10% 50V	
C703	1-102-117-00	CERAMIC 820PF 10% 50V	
C704	1-102-824-00	CERAMIC 470PF 5% 50V	
C705	1-102-824-00	CERAMIC 470PF 5% 50V	
C706	1-102-824-00	CERAMIC 470PF 5% 50V	
C707	1-107-651-11	ELECT 4.7MF 20% 250V	
C709	1-162-114-00	CERAMIC 0.0047MF 2KV	
C710	1-126-967-11	ELECT 47MF 20% 16V	
C711	1-101-880-00	CERAMIC 47PF 5% 50V	
C712	1-102-820-00	CERAMIC 330PF 5% 50V	
C713	1-101-880-00	CERAMIC 47PF 5% 50V	

< CONNECTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
CNC71	*1-568-881-51	PIN, CONNECTOR 6P	
CNC72	*1-568-880-51	PIN, CONNECTOR 5P	
CNC73	1-695-915-11	TAB (CONTACT)	
CNC76	1-695-915-11	TAB (CONTACT)	

< DIODE >

REF.NO.	PART NO.	DESCRIPTION	REMARK
D701	8-719-991-33	DIODE 1SS133T-77	
D702	8-719-991-33	DIODE 1SS133T-77	
D703	8-719-991-33	DIODE 1SS133T-77	
D704	8-719-991-33	DIODE 1SS133T-77	
D705	8-719-991-33	DIODE 1SS133T-77	
D706	8-719-991-33	DIODE 1SS133T-77	
D707	8-719-991-33	DIODE 1SS133T-77	
D708	8-719-991-33	DIODE 1SS133T-77	
D709	8-719-991-33	DIODE 1SS133T-77	
D716	8-719-991-33	DIODE 1SS133T-77	
D717	8-719-054-81	DIODE 1SS292T-77	
D718	8-719-991-33	DIODE 1SS133T-77	
D719	8-719-054-81	DIODE 1SS292T-77	
D723	8-719-991-33	DIODE 1SS133T-77	
D724	8-719-054-81	DIODE 1SS292T-77	

< CRT SOCKET >

REF.NO.	PART NO.	DESCRIPTION	REMARK
J701 ⚠	1-526-990-22	SOCKET, CRT	

< COIL >

REF.NO.	PART NO.	DESCRIPTION	REMARK
L702	1-408-425-00	INDUCTOR 220UH	

< TRANSISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q704	8-729-906-70	TRANSISTOR BF871-127	
Q705	8-729-906-70	TRANSISTOR BF871-127	
Q706	8-729-906-70	TRANSISTOR BF871-127	

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q707	8-729-200-17	TRANSISTOR 2SA1091-O	
Q708	8-729-200-17	TRANSISTOR 2SA1091-O	
Q709	8-729-200-17	TRANSISTOR 2SA1091-O	
		< RESISTOR >	
R700	1-249-405-11	SOLID 100 10% 1/4W	
R701	1-249-417-11	CARBON 1K 5% 1/4W	
R702	1-249-417-11	CARBON 1K 5% 1/4W	
R706	1-249-399-11	CARBON 33 5% 1/4W	
R707	1-249-401-11	CARBON 47 5% 1/4W	
R708	1-247-815-91	CARBON 220 5% 1/4W	
R709	1-247-815-91	CARBON 220 5% 1/4W	
R710	1-247-815-91	CARBON 220 5% 1/4W	
R711	1-249-417-11	CARBON 1K 5% 1/4W	
R714	1-249-417-11	CARBON 1K 5% 1/4W	
R715	1-249-417-11	CARBON 1K 5% 1/4W	
R716	1-249-417-11	CARBON 1K 5% 1/4W	
R717	1-260-105-11	CARBON 3.3K 5% 1/2W	
R718	1-260-105-11	CARBON 3.3K 5% 1/2W	
R719	1-260-105-11	CARBON 3.3K 5% 1/2W	
R720	1-215-923-00	METAL OXIDE 10K 5% 3W	F
R721	1-215-923-00	METAL OXIDE 10K 5% 3W	F
R722	1-215-923-00	METAL OXIDE 10K 5% 3W	F
R724	1-202-814-11	SOLID 33K 10% 1/2W	
R725	1-202-846-00	SOLID 470K 10% 1/2W	
R729	1-216-355-11	METAL OXIDE 3.3 5% 1W	F
R730	1-249-410-11	CARBON 270 5% 1/4W	
R731	1-247-815-91	CARBON 220 5% 1/4W	
R732	1-249-410-11	CARBON 270 5% 1/4W	
R734	1-247-815-91	CARBON 220 5% 1/4W	
R735	1-247-815-91	CARBON 220 5% 1/4W	
R736	1-247-815-91	CARBON 220 5% 1/4W	
R744	1-260-103-11	CARBON 2.2K 5% 1/2W	
R745	1-260-103-11	CARBON 2.2K 5% 1/2W	
R746	1-260-103-11	CARBON 2.2K 5% 1/2W	
		< VARIABLE RESISTOR >	
RV702	1-241-656-21	RES, ADJ, METAL FILM 110M	

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1646-130-A	H1 BOARD, COMPLETE ******************	(KV-21X1A/21X1B/ 21X1E)
	*A-1646-118-A	H1 BOARD, COMPLETE ******************	(KV-21X1D/21X1K/ 21X1L/21X1R/ 21X1U)
		< CAPACITOR >	
C900	1-101-810-00	CERAMIC 100PF 5% 500V	
C901	1-101-810-00	CERAMIC 100PF 5% 500V	
C902	1-137-372-11	FILM 0.022MF 5% 50V	
C903	1-137-372-11	FILM 0.022MF 5% 50V	
		< CONNECTOR >	
CN902	1-568-678-11	TERMINAL BLOCK, S 3P	
CN906	*1-564-512-11	PLUG, CONNECTOR 9P	
		< JACK >	
J900	1-764-606-11	JACK	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		< COIL >	
L900	1-408-409-00	INDUCTOR 10UH	
L901	1-408-409-00	INDUCTOR 10UH	
L902	1-408-409-00	INDUCTOR 10UH	
L903	1-408-409-00	INDUCTOR 10UH	
		< RESISTOR >	
R909	1-249-437-11	CARBON 47K 5% 1/4W	
R910	1-249-437-11	CARBON 47K 5% 1/4W	

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1646-131-A	H2 BOARD, COMPLETE ******************	(KV-21X1A/21X1B/ 21X1E)
	*A-1646-119-A	H2 BOARD, COMPLETE ******************	(KV-21X1D/21X1K/ 21X1L/21X1R/ 21X1U)
		< CAPACITOR >	
C904	1-104-665-11	ELECT 100MF 20% 25V	
C905	1-126-964-11	ELECT 10MF 20% 50V	
		< CONNECTOR >	
CN907	*1-568-879-11	PIN, CONNECTOR 4P	
		< DIODE >	
D901	8-719-302-45	DIODE SEL1210S-D	
	*4-203-258-01	HOLDER, LED ; D901	
		< IC >	
IC900	8-742-014-00	RECEIVER HIC SBX1981-51	
		< RESISTOR >	
R900	1-249-417-11	CARBON 1K 5% 1/4W	
R908	1-249-401-11	CARBON 47 5% 1/4W	

****

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1646-132-A	H3 BOARD, COMPLETE ******************	(KV-21X1A/21X1B/ 21X1E)
	*A-1646-120-A	H3 BOARD, COMPLETE ******************	(KV-21X1D/21X1K/ 21X1L/21X1R/ 21X1U)
		< CONNECTOR >	
CN908	*1-568-878-51	PIN, CONNECTOR 3P	
		< RESISTOR >	
R911	1-247-843-11	CARBON 3.3K 5% 1/4W	
R912	1-249-429-11	CARBON 10K 5% 1/4W	
R913	1-247-843-11	CARBON 3.3K 5% 1/4W	
R914	1-249-429-11	CARBON 10K 5% 1/4W	
		< SWITCH >	
S900	1-692-979-11	SWITCH, TACTILE	
S901	1-692-979-11	SWITCH, TACTILE	
S902	1-692-979-11	SWITCH, TACTILE	

****

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

MISCELLANEOUS

REF.NO.	PART NO.	DESCRIPTION	REMARK
⚠	1-406-828-11	COIL, DEGAUSSING	
	1-452-032-00	MAGNET, DISC; 10MM Ø	
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø	
	1-452-277-00	MAGNET, BMC	
⚠	1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/U2A)	
	1-504-819-11	SPEAKER (7.5X13CM)	
⚠	1-540-006-22	CAP ASSY, HIGH-VOLTAGE	
⚠	1-571-433-21	SWITCH, PUSH (AC POWER)	
⚠	1-765-286-11	CORD, POWER (KV-21X1A/21X1D/21X1E/21X1K/21X1R)	2.5A/250V
⚠	1-765-268-11	CORD, CONNECTION (KV-21X1B)	
⚠	1-590-762-11	CORD, POWER (WITH PLUG) (KV-21X1L/21X1U)	2.5A/250V
	1-693-338-11	TUNER (TUVIF) (AEP) (KV-21X1A/21X1D/21X1E/21X1K/21X1L/21X1R)	
	1-693-340-11	TUNER (TUVIF) (FR) (KV-21X1B)	
	1-693-339-11	TUNER (TUVIF) (UK) (KV-21X1U)	
⚠	8-738-784-05	PICTURE TUBE (SD-169) (A51JXH61X)	
⚠	8-738-787-71	ITC	
⚠	8-451-295-45	DEFLECTION YOKE (Y21PFA2BA)	

****

ACCESSORIES AND PACKING MATERIALS

REF.NO.	PART NO.	DESCRIPTION	REMARK
	*4-042-477-01	BAG, PROTECTION (KV-21X1A/21X1B/21X1E)	
	*4-039-905-02	BAG, PROTECTION (KV-21X1D/21X1K/21X1L/21X1R/21X1U)	
	*4-044-002-01	CUSHION (UPPER) (ASSY)	
	*4-044-003-01	CUSHION (LOWER) (ASSY)	
	*4-044-004-01	INDIVIDUAL CARTON	
	4-203-592-41	MANUAL, INSTRUCTION (KV-21X1A)(ITALIAN)	
	4-203-592-51	MANUAL, INSTRUCTION (KV-21X1B)	
	4-203-592-11	MANUAL, INSTRUCTION (KV-21X1D) (GERMAN/ENGLISH/DUTCH/ITALIAN/FRENCH/ GREEK/TURKISH)	
	4-203-592-71	MANUAL, INSTRUCTION (KV-21X1E)(SPANISH)	
	4-203-591-81	MANUAL, INSTRUCTION (KV-21X1E) (PORTUGUESE)	
	4-203-591-91	MANUAL, INSTRUCTION (KV-21X1K) (ENGLISH/POLISH/CZECH)	
	4-203-xxx-91	MANUAL, INSTRUCTION (KV-21X1R) (ENGLISH/RUSSIAN/BULGARAN)	
	4-203-591-61	MANUAL, INSTRUCTION (KV-21X1L/21X1U) (ENGLISH)	

REMOTE COMMANDER

REF.NO.	PART NO.	DESCRIPTION	REMARK
	1-473-194-11	COMMANDER, STANDARD TYPE (RM-836)	

****

Sony Corporation
Consumer A & V Products Company
TV & Display Products Div.

9-974-938-01

English
96GP71XX-1
Printed in U.K.
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SERVICE MANUAL

BE-5 CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
KV-21X1A	*RM-836*	*Italian*	*SCC-K31B-A*	*KV-21X1K*	*RM-836*	*OIRT*	*SCC-K35A-A*
KV-21X1B	*RM-836*	*French*	*SCC-K36A-A*	*KV-21X1L*	*RM-836*	*Irish*	*SCC-K35B-A*
KV-21X1D	*RM-836*	*AEP*	*SCC-K32D-A*	*KV-21X1R*	*RM-836*	*OIRT*	*SCC-K34A-A*
KV-21X1E	*RM-836*	*Spanish*	*SCC-K30B-A*	*KV-21X1U*	*RM-836*	*UK*	*SCC-K33A-A*

SUPPLEMENT - 1

SUBJECT : DELETION OF M BOARD

File this supplement with the service manual

INTRODUCTION : M Board has been deleted from above models.

- **SECTION 5 DIAGRAMS**
  (A Board, Page 35) .... See page 3
  (C Board, Page 45) .... See page 7
  (H1 Board, Page 48) .... See page 2
  (H2 Board, Page 48) .... See page 2

- **SECTION 6 EXPLODED VIEWS**
  6-1. CHASSIS (Page 52) .... See page 9
  6-2. PICTURE TUBE (Page 53)... See page 10

- **SECTION 7 ELECTRICAL PARTS LIST** (Page 54) ...... See page 11

MICROFILM

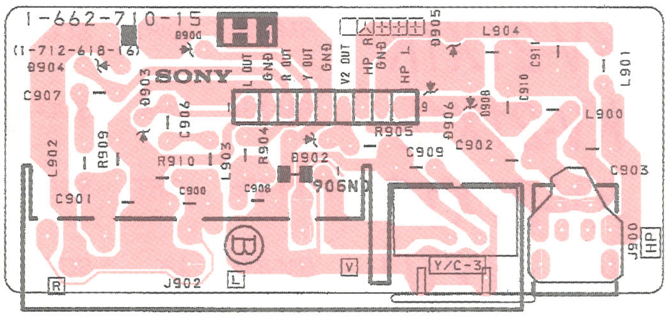
TRINITRON® COLOR TV

SONY®

H1 AUDIO/VIDEO IN,
Y-CHROMA IN,
HEADPHONES

H2 SIRCS RECEIVER
INDICATOR

H1 Board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(1-712-618-16)
SONY
H1
L OUT
GND
R OUT
Y OUT
GND
V2 OUT
HP R
GND
HP L
D900
D904
D903
D902
D905
D906
D908
C907
C906
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C900
C901
C902
C903
C908
C910
C911
L900
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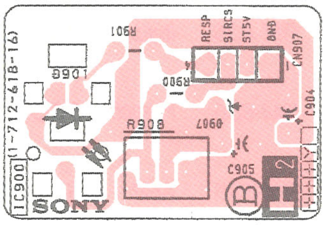
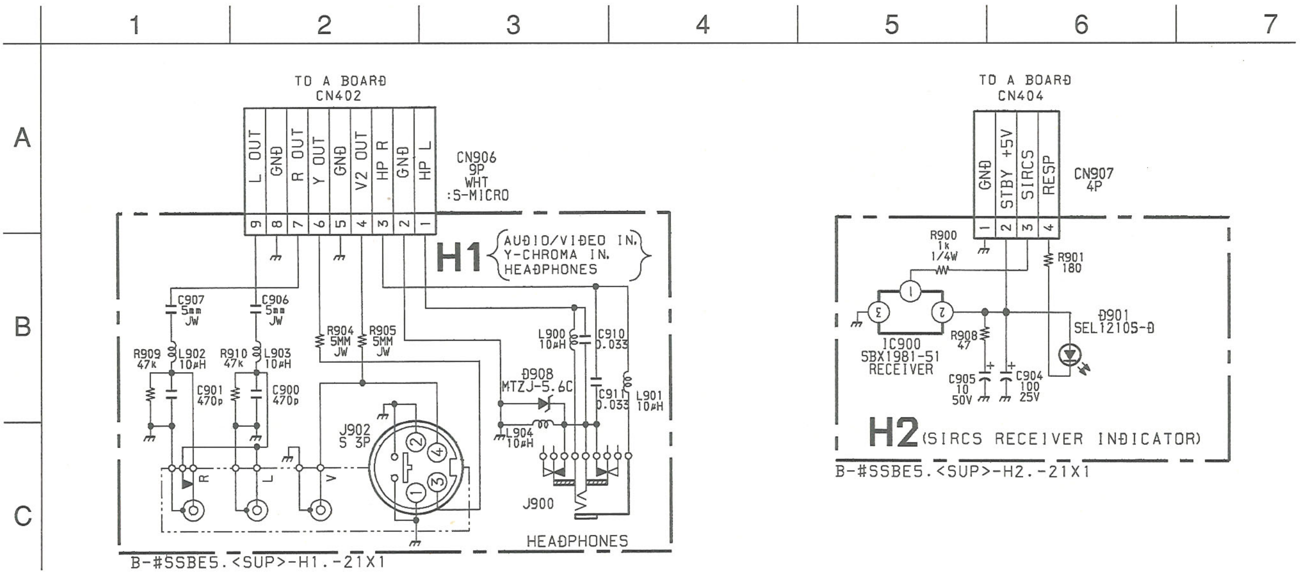
L902
L903
L904
R904
R905
R909
R910
CN906
J900
J902
HP
Y/C-3
R
L
V

H2 Board


(1-712-618-16)
SONY
H2
R901
D901
R900
R908
C904
C905
IC900
CN907
RESP
SIRCS
ST5V
GND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A
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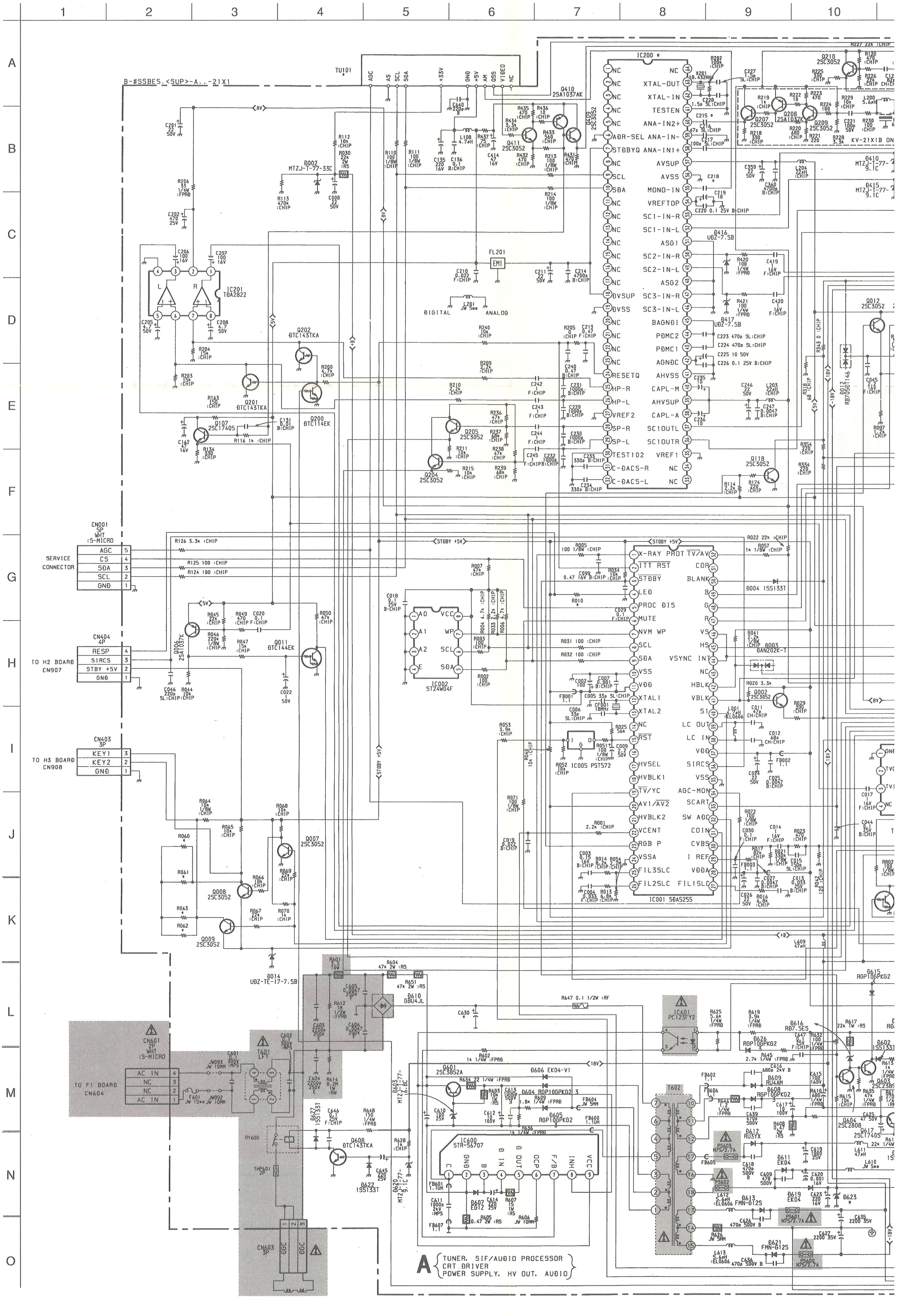
C
TO A BOARD
CN402
L OUT
GND
R OUT
Y OUT
GND
V2 OUT
HP R
GND
HP L
CN906
9P
WHT
:S-MICRO
H1 AUDIO/VIDEO IN, Y-CHROMA IN, HEADPHONES
C907
5mm
JW
C906
5mm
JW
R909
47k
L902
10µH
R910
47k
L903
10µH
C901
470p
C900
470p
R904
5MM
JW
R905
5MM
JW
L900
10µH
C910
0.033
D908
MTZJ-5.6C
C911
0.033
L901
10µH
L904
10µH
J902
S 3P
J900
HEADPHONES
R
L
V
B-#SSBE5.<SUP>-H1.-21X1
TO A BOARD
CN404
GND
STBY +5V
SIRCS
RESP
CN907
4P
R900
1k
1/4W
R901
180
D901
SEL1210S-D
IC900
SBX1981-51
RECEIVER
R908
47
C905
10
50V
C904
100
25V
H2 (SIRCS RECEIVER INDICATOR)
B-#SSBE5.<SUP>-H2.-21X1

A BOARD * MARK

	21X1A	21X1B	21X1D	21X1E	21X1K	21X1L	21X1R	21X1U
C215	—	100PF	—	—	—	—	—	—
C218	—	0.47MF	0.47MF	—	0.47MF	0.47MF	0.47MF	0.47MF
C630	180MF 400V	180MF 400V	180MF 400V	180MF 400V	180MF 400V	180MF 400V	220MF 450V	180MF 400V
D623	MTZJ-T-77-24	MTZJ-T-77-24	MTZJ-T-77-24	MTZJ-T-77-24	MTZJ-T-77-24	MTZJ-T-77-24	MTZJ-T-77-24	RD2.4ES
IC200	MSP3400C	MSP3410D	MSP3400C	MSP3410D	MSP3400C	MSP3410D	MSP3400C	MSP3410D
IC301	MC44007P	MC44002P	MC44002P	MC44002P	MC44002P	MC44007P	MC44002P	MC44007P
Q802	S2055N	S2055N	S2000H	S2055N	S2000H	S2000H	S2000H	S2000H
R010	—	—	180 1/10W	—	180 1/10W	180 1/10W	180 1/10W	180 1/10W
R060	—	—	3.3K 1/10W	—	3.3K 1/10W	3.3K 1/10W	3.3K 1/10W	3.3K 1/10W
R061	—	—	10K 1/10W	—	10K 1/10W	10K 1/10W	10K 1/10W	10K 1/10W
R062	—	—	10K 1/10W	—	10K 1/10W	10K 1/10W	10K 1/10W	10K 1/10W
R063	—	—	3.3K 1/10W	—	3.3K 1/10W	3.3K 1/10W	3.3K 1/10W	3.3K 1/10W
R808	22K 5% 1/2W	22K 5% 1/2W	22K 10% 1/2W	22K 5% 1/2W	22K 10% 1/2W	22K 10% 1/2W	22K 10% 1/2W	22K 10% 1/2W
R818	22K 5% 1/2W	22K 5% 1/2W	22K 10% 1/2W	22K 5% 1/2W	22K 5% 1/2W	22K 5% 1/2W	22K 5% 1/2W	22K 5% 1/2W
R829	JW 7.5MM	JW 7.5MM	—	JW 7.5MM	—	—	—	—
TU101	Tuner/VIF (AEP)	Tuner/VIF	Tuner/VIF (AEP)	Tuner/VIF (AEP)	Tuner/VIF (AEP)	Tuner/VIF (AEP)	Tuner/VIF (AEP)	Tuner/VIF (AEP)



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TU101
AGC
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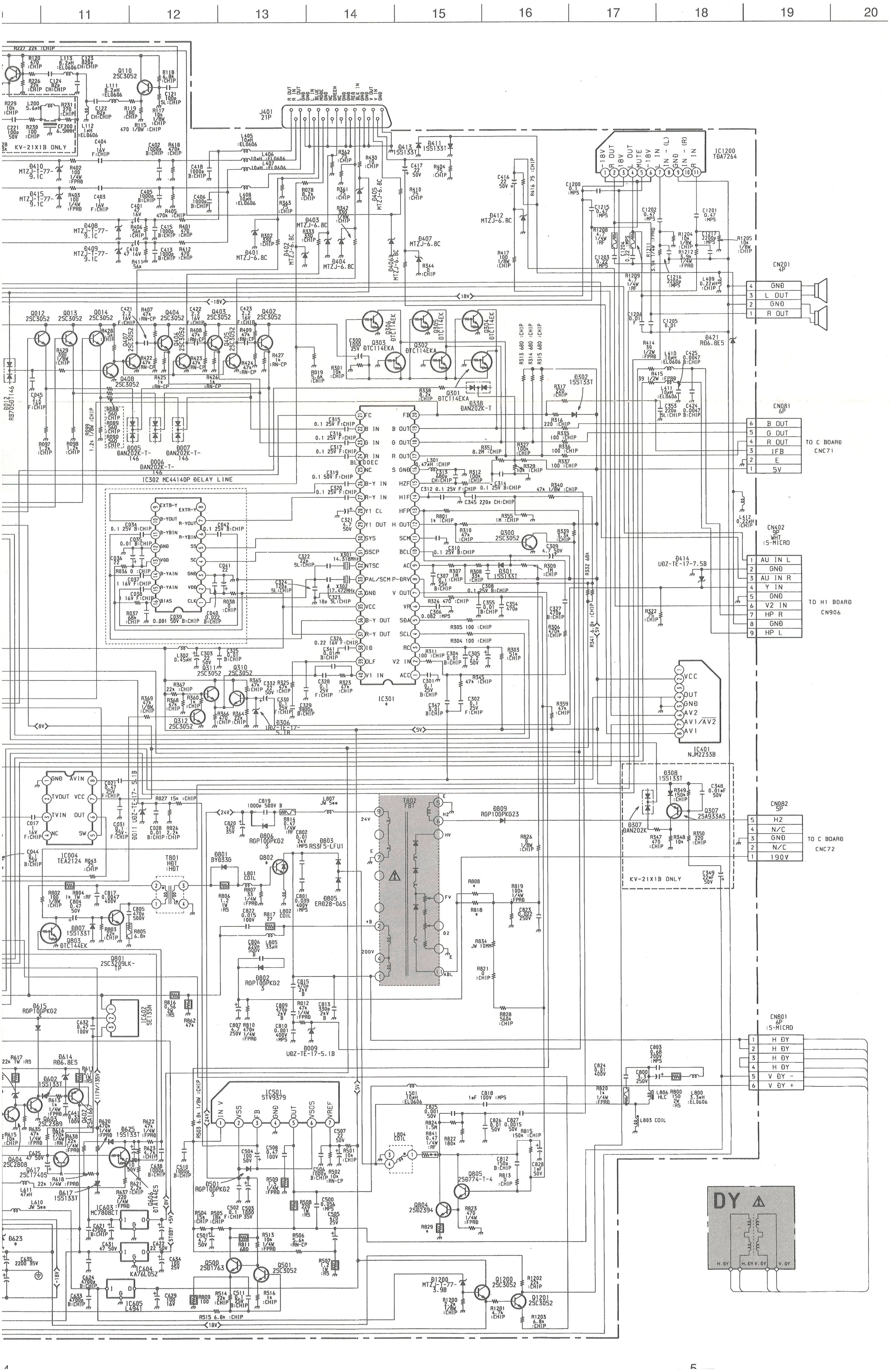
SCL
SDA
+33V
GND
+5V
AM
QSS
VIDEO
NC
IC200
IC201 TDA2822
FL201 EMI
DIGITAL
ANALOG
KV-21X1B ONLY
CN001 5P WHT :S-MICRO
SERVICE CONNECTOR
AGC
CS
SDA
SCL
GND
CN404 4P
TO H2 BOARD CN907
RESP
SIRCS
STBY +5V
GND
CN403 3P
TO H3 BOARD CN908
KEY1
KEY2
GND
IC002 ST24W04F
IC005 PST572
IC001 SDA5255
IC601 PC123FY2
CN601 2P WHT :S-MICRO
TO F1 BOARD CN604
AC IN
NC
NC
AC IN
T601 LFT
RY600
THP601 2P
CN603 3P
DGC
DGC
IC600 STR-S6707
T602
D610 GBU4JL

A {TUNER, SIF/AUDIO PROCESSOR
CRT DRIVER
POWER SUPPLY, HV OUT, AUDIO}


11
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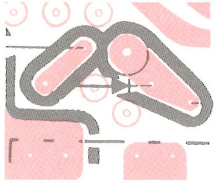
J401 21P
IC1200 TDA7264
CN201 4P
GND
L OUT
GND
R OUT
CN081 6P
B OUT
G OUT
R OUT
IFB
E
5V
TO C BOARD CNC71
CN402 9P WHT :S-MICRO
AU IN L
GND
AU IN R
Y IN
GND
V2 IN
HP R
GND
HP L
TO H1 BOARD CN906
IC401 NJM2233B
VCC
OUT
GND
AV2
AV1/AV2
AV1
IC302 MC44140P DELAY LINE
IC301
CN082 5P
H2
N/C
GND
N/C
190V
TO C BOARD CNC72
KV-21X1B ONLY
KV-21X1B ONLY
T802 FBT
T801 HOT :HDT
IC004 TEA2124
IC501 STV9379
IC602 SE135N
IC603 MC7808CT
IC604 KA76L05Z
IC605 L4941
CN801 6P :S-MICRO
H DY
H DY
H DY
H DY
V DY -
V DY +
DY
H.DY
V.DY
L803 COIL
L804 COIL
L801 COIL
D805 ERD28-06S
D803 RGP10GPKG2
D809 RGP10GPKG23
Q801 2SC3209LK-1P
Q805 2SD774-T-4
Q804 2SD2394
Q500 2SD1763
Q501 2SC3052
Q1200 2SC3052
Q1201 2SC3052
Q300 2SC3052
Q307 2SA933AS
D308 1SS133T
D307 DAN202K
18V
24V
8V
5V

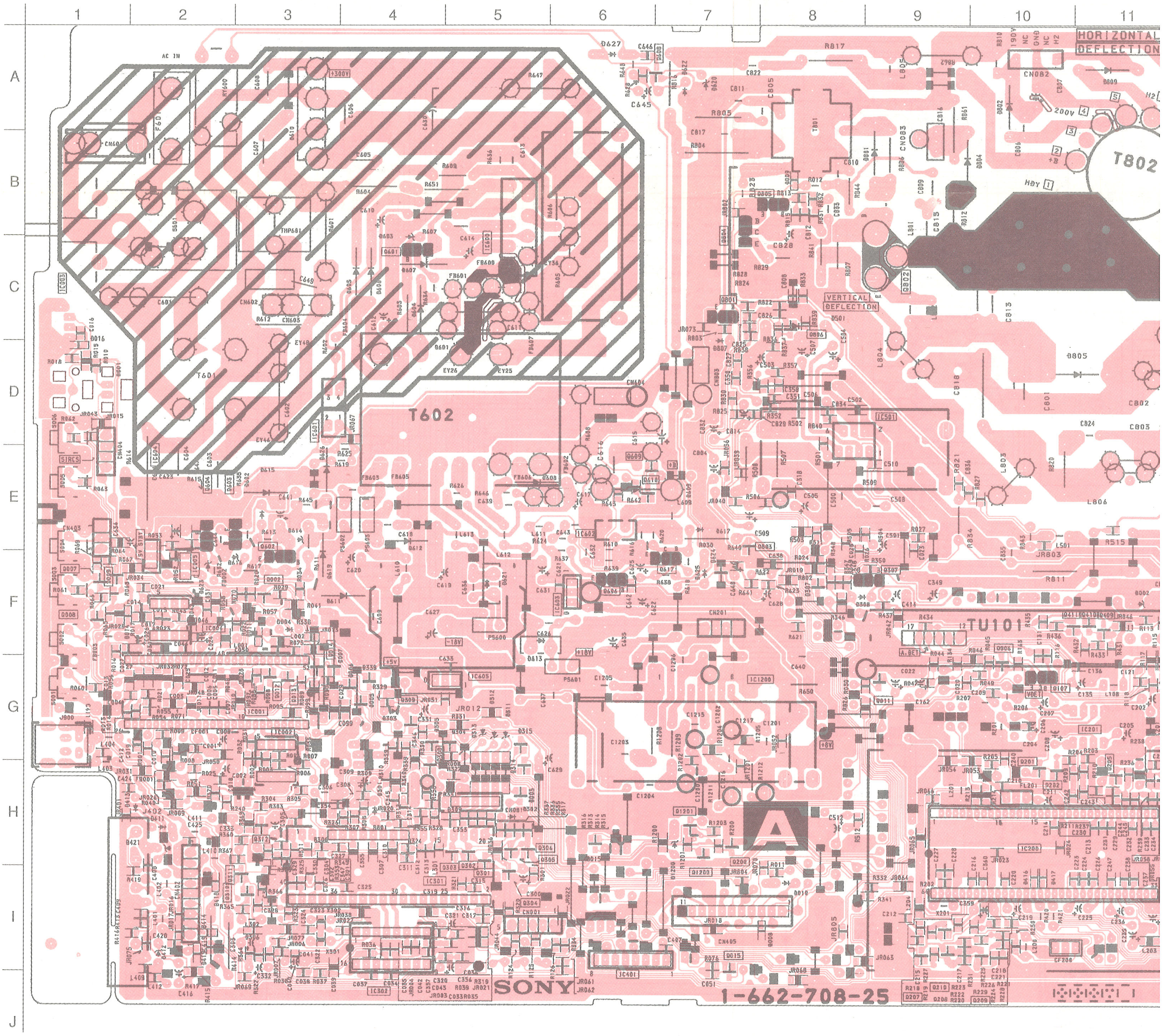


Note:
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

A

TUNER, SIF/AUDIO PROCESSOR
CRT DRIVER
POWER SUPPLY. HV OUT AUDIO

A Board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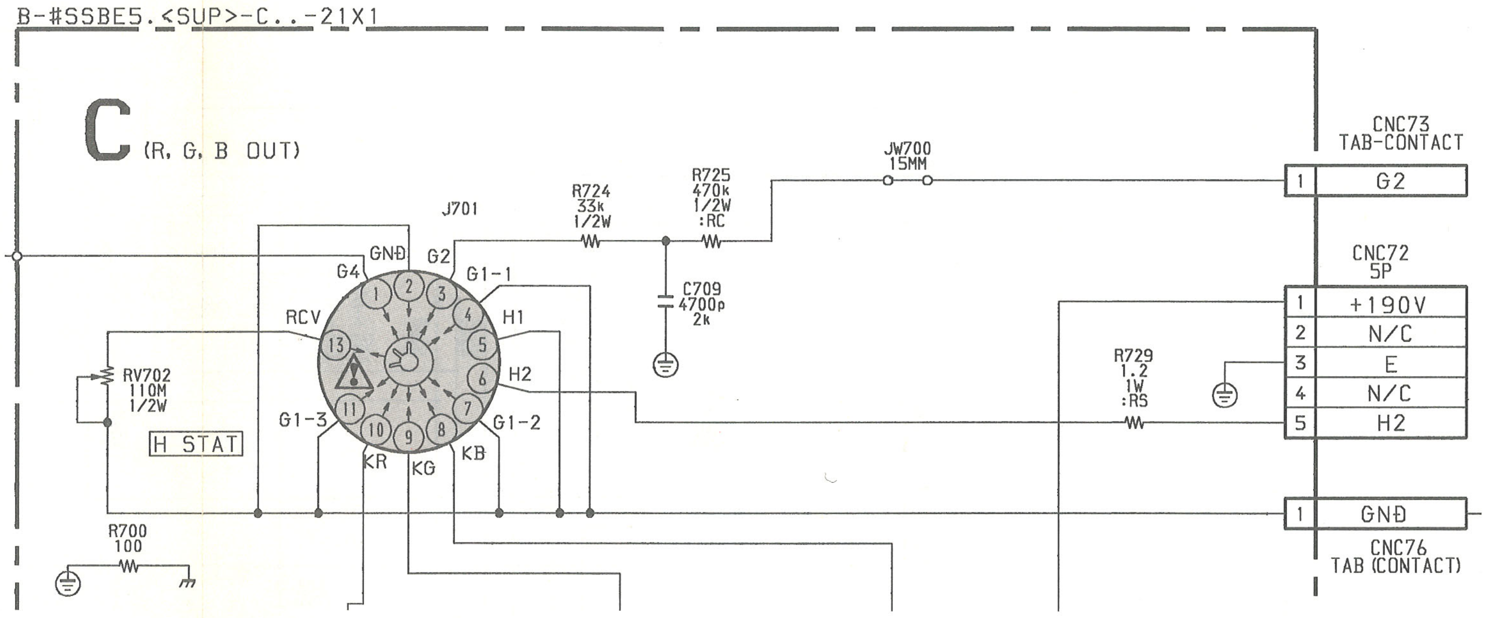
AC IN
HORIZONTAL DEFLECTION
T802
VERTICAL DEFLECTION
T601
T602
TU101
A
SONY
1-662-708-25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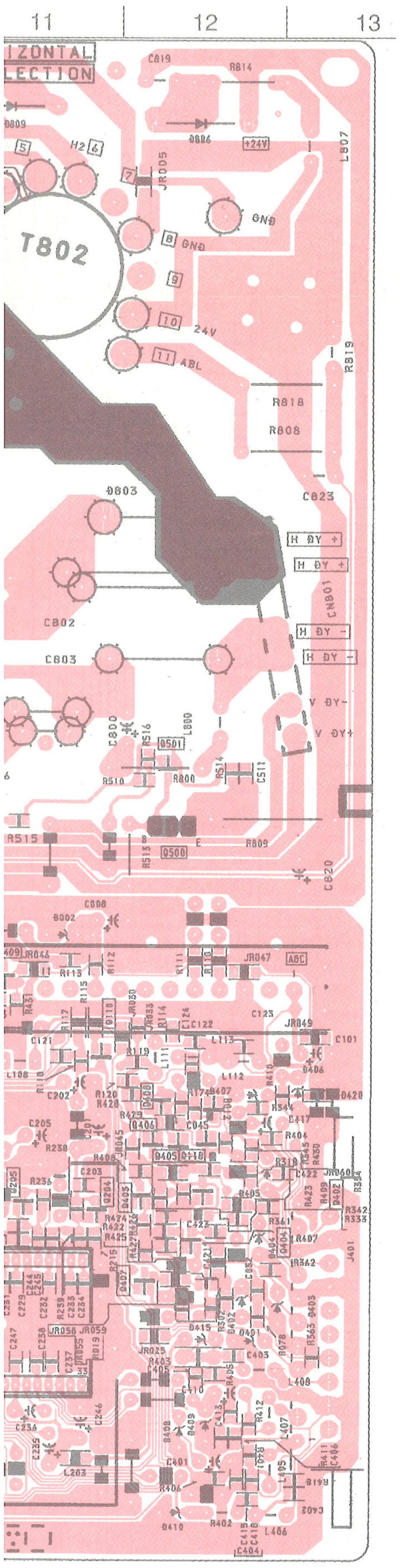
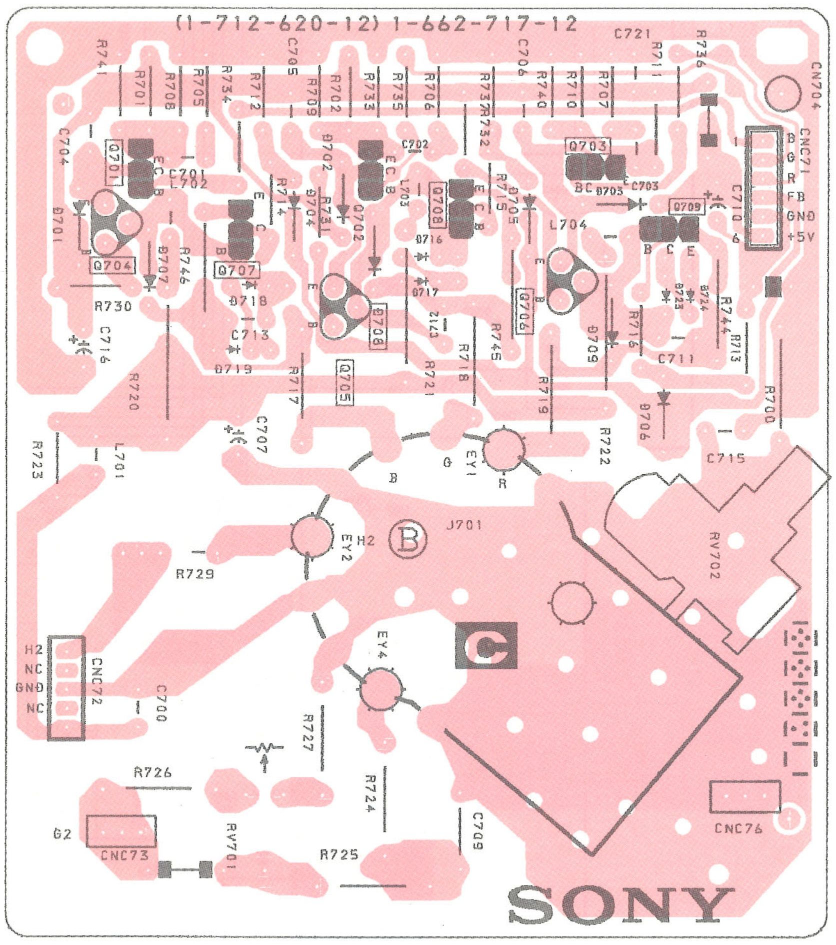
C (R, G, B OUT)
J701
GND
G2
G4
G1-1
H1
RCV
H2
G1-3
G1-2
KR
KG
KB
R724
33k
1/2W
R725
470k
1/2W
:RC
JW700
15MM
C709
4700p
2k
RV702
110M
1/2W
H STAT
R700
100
R729
1.2
1W
:RS
CNC73
TAB-CONTACT
1 G2
CNC72
5P
1 +190V
2 N/C
3 E
4 N/C
5 H2
1 GND
CNC76
TAB (CONTACT)


11
12
13
IZONTAL
LECTION
T802
GND
24V
ABL
CNB01
H DY +
H DY -
V DY-
V DY+
+24V
R819
R818
R808
C823
C802
C803

C [R, G, B, OUT]

C Board


(1-712-620-12) 1-662-717-12
J701
CNC71
CNC72
CNC73
CNC76
RV702
RV701
H2
NC
GND
NC
G2
B
G
R
FB
GND
+5V
SONY

SECTION 6

EXPLODED VIEWS

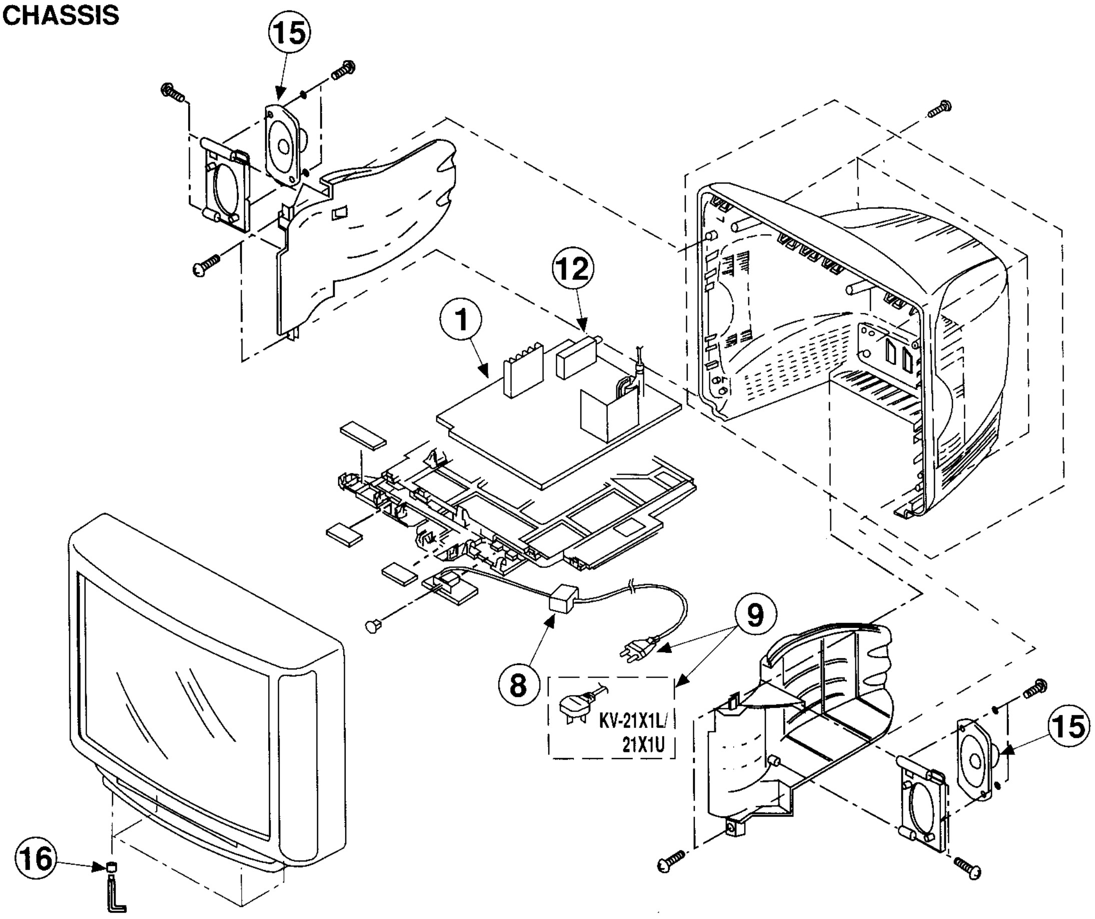
NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

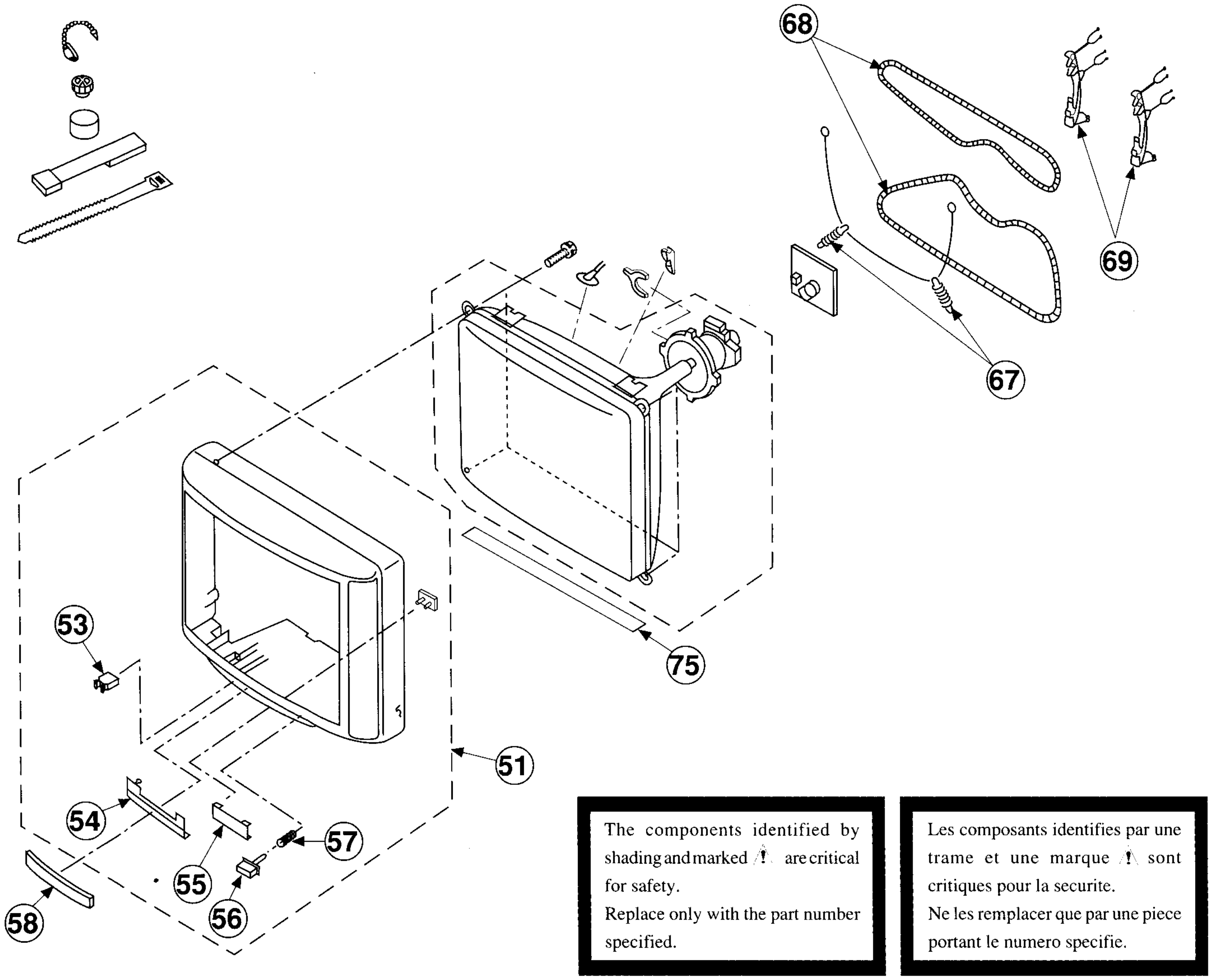
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	*A-1632-695-A	A BOARD, COMPLETE (KV-21X1A)					
2	*A-1634-042-A	M BOARD, COMPLETE (DELETED)					
8	4-389-201-01	HOLDER, AC CORD (KV-21X1D/21X1K/21X1L/21X1R/21X1U)					
9	⚠ 1-765-268-11	CORD, POWER (KV-21X1B)					
	⚠ 1-776-204-11	CORD, POWER (WITH PLUG) (KV-21X1L/21X1U)	2.5A/250V				
12	1-693-340-11	TUNER (TUVIF) (KV-21X1U)					
15	1-544-727-21	SPEAKER (7.5X13CM)					
16	4-203-385-01	M4 INSERT (KV-21X1L/21X1U)					

6-2. PICTURE TUBE



The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF NO	PART NO	DESCRIPTION	REMARK
51	X-4200-297-1	BEZNET ASSY (KV-21X1A/21X1B/21X1E)	
	X-4200-298-1	BEZNET ASSY (KV-21X1D/21X1K/21X1L/21X1R/21X1U)	
53	4-047-464-01	CATCHER PUSH	
54	4-043-526-01	DOOR (KV-21X1A/21X1B/21X1E)	
55	4-043-525-01	WINDOW ORNAMENTAL (KV-21X1A/21X1B/21X1E)	
56	4-043-517-01	BUTTON POWER	
57	4-202-746-01	SPRING, COMPRESSION (KV-21X1A/21X1B/21X1E)	
58	4-043-527-01	ORNAMENT, DOOR (KV-21X1A/21X1B/21X1E)	
	4-202-644-01	ORNAMENT, DOOR (KV-21X1D/21X1K/21X1R)	
67	4-369-318-21	SPRING TENSION (KV-21X1A/21X1B/21X1E)	
	4-200-433-01	SPRING TENSION (KV-21X1D/21X1K/21X1L/21X1R/21X1U)	
68	⚠ 1-411-922-11	COIL DEGAUSSING (KV-21X1A/21X1B/21X1E)	
69	*4-386-622-01	BAND, DGC (KV-21X1D/21X1K/21X1L/21X1R/21X1U)	
75	4-203-128-01	SHEET, BLOTTING (KV-21X1A/21X1B/21X1E)	
	4-203-128-11	SHEET BLOTTING (KV-21X1D/21X1K/21X1L/21X1R/21X1U)	

SECTION 7
ELECTRICAL PARTS LIST

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

When indicating parts by reference number, please include the board name.

CAPACITORS
MF : mF , PF : mmF

COILS
MMH : mH , μH : mH

A

REF.NO.	PART NO.	DESCRIPTION			REMARK
	*A-1632-695-A	A BOARD, COMPLETE (KV-21X1A) *****************			
		< CAPACITOR >			
C002	1-126-968-11	ELECT	100MF	20%	50V
C003	1-164-492-11	CERAMIC CHIP	0.15MF	10%	16V
C004	1-163-034-00	CERAMIC CHIP	0.033MF		50V
C005	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C006	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C007	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C009	1-126-961-11	ELECT	2.2MF	20%	50V
C011	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C012	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C013	1-163-078-11	CERAMIC CHIP	0.033MF	10%	25V
C016	DELETED				
C017	1-162-638-11	CERAMIC CHIP	1MF		16V
C018	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C022	1-126-960-11	ELECT	1MF	20%	50V
C024	1-126-965-11	ELECT	22MF	20%	50V
C025	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C026	1-126-965-11	ELECT	22MF	20%	50V
C027	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C028	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C030	1-163-077-00	CERAMIC CHIP	0.1MF		50V
C045	1-164-505-11	CERAMIC CHIP	2.2MF		16V
C046	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C050	DELETED				
C051	DELETED				
C099	1-165-320-11	CERAMIC CHIP	0.47MF	10%	16V
C202	1-126-941-11	ELECT	470MF	20%	25V
C204	DELETED				
C205	1-126-963-11	ELECT	4.7MF	20%	50V
C208	1-126-963-11	ELECT	4.7MF	20%	50V
C209	DELETED				
C213	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C300	1-126-942-61	ELECT	1000MF	20%	25V
C302	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C306	1-136-164-00	FILM	0.082MF	5%	50V
C307	1-163-077-00	CERAMIC CHIP	0.1MF	10%	25V
C308	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C325	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C326	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C328	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C333	DELETED				
C345	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C350	DELETED				
C355	1-163-059-91	CERAMIC CHIP	0.01MF	10%	50V
C358	DELETED				
C414	1-126-967-11	ELECT	47MF	20%	16V
C424	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C425	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C500	1-137-465-11	FILM	0.056MF	5%	50V
C603	⚠ 1-117-700-61	CERAMIC	0.0022MF	99%	250V
C604	⚠ 1-117-700-61	CERAMIC	0.0022MF	99%	250V
C620	1-111-041-11	ELECT	0.001MF	20%	16V
C623	1-111-034-11	ELECT	220MF	20%	16V
C629	1-126-933-11	ELECT	100MF	20%	16V
C630	1-117-751-11	ELECT	220MF	20%	450V (KV-21X1R)
C631	1-124-910-11	ELECT	47MF	20%	50V
C632	1-130-785-11	MYLAR	0.47MF	10%	100V
C638	1-163-205-00	CERAMIC CHIP	0.001MF	10%	50V
C641	1-130-783-00	MYLAR	0.33MF	10%	100V
C645	1-104-666-11	ELECT	220MF	20%	25V
C646	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C647	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C804	1-126-959-11	ELECT	0.47MF	20%	50V
C809	1-162-134-11	CERAMIC	470PF	10%	2KV
C812	1-163-121-11	CERAMIC CHIP	150PF	5%	50V
C813	1-162-115-00	CERAMIC	330PF	10%	2KV
C815	1-162-134-11	CERAMIC	470PF	10%	2KV
C827	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C828	1-126-960-11	ELECT	1MF	20%	50V
C1001	DELETED				
C1002	DELETED				
C1003	DELETED				
C1004	DELETED				
C1005	DELETED				
C1006	DELETED				
C1007	DELETED				
C1008	DELETED				
C1009	DELETED				
C1010	DELETED				
C1011	DELETED				
C1012	DELETED				
C1013	DELETED				
C1014	DELETED				
C1015	DELETED				
C1016	DELETED				

A

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1017	DELETED		
		< FILTER >	
CF001	1-767-120-21	VIBRATOR, CERAMIC	
CF1001	DELETED		
		< CONNECTOR >	
CN001	*1-564-508-11	PIN, CONNECTOR 5P	
CN403	*1-564-518-11	PIN, CONNECTOR 3P	
CN404	*1-564-519-11	PIN, CONNECTOR 4P	
CN602	⚠ DELETED		
		< DIODE >	
D003	8-719-914-43	DIODE DAN202K	
D009	8-719-976-99	DIODE UDZ-TE-5.1B	
D011	8-719-976-99	DIODE UDZ-TE-5.1B	
D012	8-719-992-02	DIODE RB705D	
D014	8-719-056-84	DIODE UDZ-TE-7.5B	
D015	DELETED		
D201	DELETED		
D306	8-719-976-80	DIODE UDZ-TE-5.1B	
D307	8-719-914-43	DIODE DAN202K	(KV-21X1B)
D338	8-719-991-33	DIODE DAN202K	
D413	8-719-991-33	DIODE 1SS133T-77	
D414	8-719-056-84	DIODE UDZ-TE-7.5B	
D416	8-719-056-84	DIODE UDZ-TE-7.5B	
D417	8-719-056-84	DIODE UDZ-TE-7.5B	
D421	8-719-109-97	DIODE RD6.8ES-B2	
D606	8-719-028-89	DIODE EK04-V1	
D611	8-719-028-89	DIODE EK04-V1	
D614	8-719-109-97	DIODE RD6.8ES	
D616	8-719-110-03	DIODE RD7.5ES	
D619	8-719-028-89	DIODE EK04-V1	
D623	8-719-924-16	DIODE MTZJ-T-77-24	(KV-21X1A/21X1B/21X1D/21X1E/21X1K/21X1L/21X1R)
	8-719-110-60	DIODE RD24ES	(KV-21X1U)
		< FERRITE BEAD >	
FB001	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB002	1-412-911-11	INDUCTOR, FERRITE BEAD	
FB003	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB1001	DELETED		
FB1002	DELETED		
FB1003	DELETED		
		< IC >	
IC001	8-759-473-01	IC SDA5255	
IC002	8-759-437-34	IC ST24W04FB6	
IC200	8-759-493-49	IC MSP3410D-PB-84	(KV-21X1B/21X1E/21X1L/21X1U)
IC604	8-759-457-41	IC KA76L05Z	
IC1002	DELETED		
IC1003	DELETED		
IC1004	DELETED		
		< SOCKET >	
J401	1-695-551-11	SOCKET, 21P	(KV-21X1A/21X1B/21X1E)
	1-561-534-00	SOCKET, 21P	(KV-21X1D/21X1K/21X1L/21X1R/21X1U)

REF.NO.	PART NO.	DESCRIPTION	REMARK
		< COIL >	
L001	1-408-405-00	INDUCTOR 4.7UH	
L002	DELETED		
L108	1-414-740-21	INDUCTOR 4.7UH	
L301	1-410-989-11	INDUCTOR CHIP 0.47UH	
L302	1-410-396-41	INDUCTOR 0.45UH	
L405	1-408-409-00	INDUCTOR 10UH	
L406	1-408-409-00	INDUCTOR 10UH	
L407	1-408-409-00	INDUCTOR 10UH	
L408	1-408-409-00	INDUCTOR 10UH	
L409	1-410-985-11	INDUCTOR CHIP 0.22UH	
L410	1-408-409-00	INDUCTOR 10UH	
L411	1-408-409-00	INDUCTOR 10UH	
L412	1-410-985-11	INDUCTOR CHIP 0.22UH	
L501	1-412-525-31	INDUCTOR 10UH	
L609	1-414-743-21	INDUCTOR 47UH	
L611	1-414-743-21	INDUCTOR 47UH	
L1001	DELETED		
		< TRANSISTOR >	
Q002	8-729-120-28	TRANSISTOR 2SC1623	
Q007	8-729-120-28	TRANSISTOR 2SC1623	
Q008	8-729-120-28	TRANSISTOR 2SC1623	
Q009	8-729-120-28	TRANSISTOR 2SC1623	
Q011	1-801-806-11	TRANSISTOR DTC144EKA	
Q012	8-729-120-28	TRANSISTOR 2SC1623	
Q013	8-729-120-28	TRANSISTOR 2SC1623	
Q014	8-729-120-28	TRANSISTOR 2SC1623	
Q015	DELETED		
Q110	8-729-120-28	TRANSISTOR 2SC1623	
Q118	8-729-120-28	TRANSISTOR 2SC1623	
Q204	8-729-120-28	TRANSISTOR 2SC1623	
Q205	8-729-120-28	TRANSISTOR 2SC1623	
Q207	8-729-120-28	TRANSISTOR 2SC1623	
Q209	8-729-120-28	TRANSISTOR 2SC1623	
Q210	8-729-120-28	TRANSISTOR 2SC1623	
Q300	8-729-120-28	TRANSISTOR 2SC1623	
Q310	8-729-120-28	TRANSISTOR 2SC1623	
Q311	8-729-120-28	TRANSISTOR 2SC1623	
Q312	8-729-120-28	TRANSISTOR 2SC1623	
Q402	8-729-120-28	TRANSISTOR 2SC1623	
Q403	8-729-120-28	TRANSISTOR 2SC1623	
Q404	8-729-120-28	TRANSISTOR 2SC1623	
Q405	8-729-120-28	TRANSISTOR 2SC1623	
Q406	8-729-120-28	TRANSISTOR 2SC1623	
Q407	8-729-120-28	TRANSISTOR 2SC1623	
Q408	8-729-120-28	TRANSISTOR 2SC1623	
Q409	8-729-120-28	TRANSISTOR 2SC1623	
Q410	8-729-026-49	TRANSISTOR 2SA1037AK	
Q411	8-729-120-28	TRANSISTOR 2SC1623	
Q501	8-729-120-28	TRANSISTOR 2SC1623	
Q608	8-729-027-56	TRANSISTOR DTC143TKA-T146	
Q802	8-729-041-25	TRANSISTOR S2055N-16E305A	(KV-21X1A/21X1B/21X1E)
Q803	1-801-806-11	TRANSISTOR DTC144EKA	
Q1200	8-729-120-28	TRANSISTOR 2SC1623	
Q1201	8-729-120-28	TRANSISTOR 2SC1623	

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

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Ne les remplacer que par une piece portant le numero specifie.

< RESISTOR >

REF.NO.	PART NO.	DESCRIPTION				REMARK
R002	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R003	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R004	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R005	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R006	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W	
R007	1-216-089-00	METAL GLAZE	47K	5%	1/10W	
R013	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R014	1-249-071-00	METAL GLAZE	8.2K	5%	1/10W	
R015	DELETED					
R016	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W	
R017	1-216-095-00	METAL GLAZE	82K	5%	1/10W	
R020	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R021	1-216-258-00	METAL GLAZE	330K	5%	1/8W	
R022	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R023	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R027	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R028	DELETED					
R031	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R032	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R033	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R040	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R041	1-216-206-00	METAL GLAZE	2.2K	5%	1/8W	
R043	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R047	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R053	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W	
R054	1-216-129-00	METAL GLAZE	2.2M	5%	1/10W	
R057	1-216-198-91	METAL GLAZE	1K	5%	1/8W	
R060	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	(KV-21X1D/21X1K/21X1L/21X1R/21X1U)
R061	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-21X1D/21X1K/21X1L/21X1R/21X1U)
R062	1-216-073-00	METAL GLAZE	10K	5%	1/10W	(KV-21X1D/21X1K/21X1L/21X1R/21X1U)
R063	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	(KV-21X1D/21X1K/21X1L/21X1R/21X1U)
R071	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R072	1-216-174-00	METAL GLAZE	100	5%	1/8W	
R075	DELETED					
R076	DELETED					
R088	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R089	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R114	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W	
R174	1-216-033-00	METAL GLAZE	220	5%	1/10W	
R201	DELETED					
R203	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R204	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R206	∘ 1-249-399-11	CARBON	33	5%	1/4W	
R207	DELETED					
R318	1-216-021-00	METAL GLAZE	68	5%	1/10W	
R326	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R328	1-216-073-00	METAL GLAZE	10K	5%	1/10W	
R335	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R336	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R337	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R338	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W	
R340	1-216-238-91	METAL GLAZE	47K	5%	1/8W	
R342	1-216-186-00	METAL GLAZE	330	5%	1/8W	
R349	1-216-101-00	METAL GLAZE	150K	5%	1/10W	(KV-21X1B)
R351	1-216-463-11	METAL GLAZE	8.2M	5%	1/10W	
R352	DELETED					
R356	DELETED					
R357	DELETED					
R407	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R408	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R409	1-216-691-11	METAL CHIP	47K	0.50%	1/10W	
R410	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R422	1-216-691-11	METAL GLAZE	47K	0.50%	1/10W	
R423	1-216-691-11	METAL GLAZE	47K	0.50%	1/10W	
R424	1-216-691-11	METAL GLAZE	47K	0.50%	1/10W	
R425	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R426	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R427	1-216-651-11	METAL CHIP	1K	0.50%	1/10W	
R429	1-216-188-00	METAL GLAZE	390	5%	1/8W	
R430	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R431	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R432	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R433	1-216-043-91	METAL GLAZE	560	5%	1/10W	
R434	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	
R435	1-216-041-00	METAL GLAZE	470	5%	1/10W	
R436	1-216-001-00	METAL GLAZE	10	5%	1/10W	
R437	1-216-022-00	METAL GLAZE	75	5%	1/10W	
R501	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R502	1-216-675-11	METAL CHIP	10K	0.50%	1/10W	
R503	1-216-218-00	METAL GLAZE	6.8K	5%	1/8W	
R504	1-216-077-00	METAL GLAZE	15K	5%	1/10W	
R505	1-216-079-00	METAL GLAZE	18K	5%	1/10W	
R506	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W	
R510	DELETED					
R513	1-249-429-11	CARBON	10K	5%	1/4W	
R514	1-216-081-00	METAL GLAZE	22K	5%	1/10W	
R516	1-216-049-00	METAL GLAZE	1K	5%	1/10W	
R605	1-216-365-00	METAL OXIDE	0.47	5%	2W	F
R625	1-249-426-11	CARBON	5.6K	5%	1/4W	
R628	1-216-049-00	METAL GLAZE	1K	5%	1/10W	F
R806	1-216-350-00	METAL OXIDE	1.2	5%	1W	F
R808	1-260-115-11	CARBON	22K	5%	1/2W	(KV-21X1D/21X1K/21X1L/21X1R/21X1U)
R809	1-215-911-11	METAL OXIDE	100	5%	3W	F
R811	1-215-891-11	METAL OXIDE	680	5%	2W	F
R820	1-215-869-11	METAL OXIDE	1K	5%	1W	F
R822	1-216-103-00	METAL GLAZE	180K	5%	1/10W	
R841	1-249-377-11	CARBON	0.47	5%	1/4W	F
R862	1-216-115-00	METAL GLAZE	47K	5%	2W	
R1001	DELETED					
R1002	DELETED					
R1003	DELETED					
R1004	DELETED					
R1005	DELETED					
R1006	DELETED					
R1009	DELETED					
R1010	DELETED					
R1011	DELETED					
R1012	DELETED					
R1013	DELETED					
R1014	DELETED					
R1015	DELETED					
R1016	DELETED					
R1017	DELETED					

A C H1 H2 H3

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1019	DELETED		
R1020	DELETED		
R1021	DELETED		
R1022	DELETED		
R1023	DELETED		
R1024	DELETED		
R1025	DELETED		
R1026	DELETED		
R1027	DELETED		
R1028	DELETED		
R1029	DELETED		
R1030	DELETED		
R1031	DELETED		
R1032	DELETED		
R1033	DELETED		
R1034	DELETED		
R1035	DELETED		
R1036	DELETED		
R1037	DELETED		
R1038	DELETED		
R1039	DELETED		
R1040	DELETED		
R1041	DELETED		
R1042	DELETED		
R1043	DELETED		
R1204	1-216-222-00	METAL GLAZE 10K 5% 1/8W	
R1205	1-216-222-00	METAL GLAZE 10K 5% 1/8W	

< TUNER >

REF.NO.	PART NO.	DESCRIPTION	REMARK
TU101	1-693-338-11	TUNER/VIF (AEP)	(KV-21X1U)

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C BOARD, COMPLETE
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< CAPACITOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
C701	1-102-115-00	CERAMIC 560PF 10% 50V	
C702	1-102-115-00	CERAMIC 560PF 10% 50V	
C703	1-102-115-00	CERAMIC 560PF 10% 50V	

< CRT SOCKET >

REF.NO.	PART NO.	DESCRIPTION	REMARK
J701	⚠ 1-526-990-21	SOCKET, CRT	

< RESISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
R700	1-260-087-81	CARBON 100 5% 1/2W	(KV-21X1A/21X1B/21X1E)
	1-202-549-00	SOLID 100 20% 1/2W	(KV-21X1D/21X1K/21X1L/21X1R/21X1U)
R724	1-260-117-11	CARBON 33K 5% 1/2W	(KV-21X1A/21X1B/21X1E)
R725	1-260-131-11	CARBON 470K 5% 1/2W	(KV-21X1A/21X1B/21X1E)
R729	1-216-350-11	METAL OXIDE 1.2 5% 1W F	

H1 BOARD, COMPLETE
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< CAPACITOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
C900	1-102-114-00	CERAMIC 470PF 10% 50V	
C901	1-102-114-00	CERAMIC 470PF 10% 50V	
C902	DELETED		
C903	DELETED		
C910	1-130-489-00	FILM 0.033MF 5% 50V	
C911	1-130-489-00	FILM 0.033MF 5% 50V	

< CONNECTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN902	DELETED		

< DIODE >

REF.NO.	PART NO.	DESCRIPTION	REMARK
D908	8-719-109-89	TRANSISTOR RD5.6ESB2	

< JACK >

REF.NO.	PART NO.	DESCRIPTION	REMARK
J902	1-568-678-11	TERMINAL BLOCK, 3P	

< COIL >

REF.NO.	PART NO.	DESCRIPTION	REMARK
L904	1-408-409-00	INDUCTOR 10UH	

< RESISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
R904	1-535-303-00	LEAD, JUMPER (5.0MM)	
R905	1-535-303-00	LEAD, JUMPER (5.0MM)	

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H2 BOARD, COMPLETE
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< CONNECTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN907	*1-564-519-11	PIN, CONNECTOR 4P	

< IC >

REF.NO.	PART NO.	DESCRIPTION	REMARK
IC900	8-742-014-11	RECEIVER HIC SBX1981-51	

< RESISTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
R901	1-249-408-11	CARBON 180 5% 1/4W	

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H3 BOARD, COMPLETE
****

< CONNECTOR >

REF.NO.	PART NO.	DESCRIPTION	REMARK
CN908	*1-564-518-11	PIN, CONNECTOR 3P	

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MISCELLANEOUS
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REF.NO.	PART NO.	DESCRIPTION	REMARK
⚠	1-411-922-11	COIL, DEGAUSSING (KV-21X1A/21X1B/21X1E)	
	1-544-727-21	SPEAKER (7.5X13C)	
⚠	1-765-286-11	CORD, POWER (KV-21X1B)	
	1-776-204-11	CORD, POWER (WITH PLUG)	2.5A/250V (KV-21X1L/21X1U)
	1-693-340-11	TUNER (TUVIF) (KV-21X1U)	

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ACCESSORIES AND PACKING MATERIALS
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REF.NO.	PART NO.	DESCRIPTION	REMARK
	*4-044-002-11	CUSHION (UPPER) (ASSY) (KV-21X1A/21X1B/21X1E)	
	*4-044-003-11	CUSHION (LOWER) (ASSY) (KV-21X1A/21X1B/21X1E)	
	*4-044-004-11	INDIVIDUAL CARTON(KV-21X1A/21X1B/21X1E)	
	4-203-591-11	MANUAL, INSTRUCTION (KV-21X1D) (GERMAN/ENGLISH/DUTCH/ITALIAN/FRENCH/GREEK/TURKISH)	
	4-203-592-81	MANUAL, INSTRUCTION (KV-21X1E) (PORTUGUESE)	
	4-203-656-92	MANUAL, INSTRUCTION (KV-21X1R) (ENGLISH/RUSSIAN/BULGARIAN)	

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